HEATING

AND

AIR CONDITIONING

MANUFACTURED BY

E. E. SOUTHER IRON COMPANY

1952 Kienlen Avenue • St. Louis 20, Missouri

Telephone: EVergreen 5-5900

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DEALERS'
NET PRICE LIST

Southaire

WARM AIR HEATING
AIR CONDITIONING UNITS

No. 160

Effective January 15, 1959

Prices and Terms are Subject to Change Without Notice

TERMS AND OTHER CONDITIONS

TERMS

Terms—2% cash discount for payment 10th of month following shipment—net end of month following shipment.

Cash discount to be taken from net amount of invoice—no discount allowed on freight.

FREIGHT ALLOWANCES

Prices are f.o.b. factory, subject to the following freight allowances EXCEPT where specifically stated that no freight allowance applies.

Less than Carload Shipments—Actual regular rail rate (not collect and deliver rate) of freight from factory allowed up to but not exceeding 50c per cwt.

Carload Shipments—Actual regular rail rate of freight, including Federal taxes levied on freight charges allowed—except that truck rate, if lower, will be allowed in case of truckload shipments—to all points east of the eastern boundaries of North Dakota, South Dakota, Nebraska, and Kansas, and north of the southern boundaries of Missouri, Kentucky, and Virginia, including all towns on such boundary lines. To points beyond these boundaries, the actual carload freight rate to the boundary line will be allowed.

Federal or other taxes levied on freight charges are not included in the Freight Allowances made on less than Carload or less than Truckload Shipments.

In no event is more than the actual freight charge allowed.

Freight allowance does not apply to shipments of repairs or accessories.

ACCEPTANCE OF ORDERS

All orders are accepted conditioned upon fires, floods, strikes, accidents, and conditions beyond our control.

All orders are accepted on the condition that the price in effect at the time of shipment applies.

CLAIMS

The responsibility of this company ceases upon delivery of goods, in good order to transportation company. If shipment is offered to purchaser by transportation company in bad order, purchaser should require that transportation company's agent make notation of damage or shortage on paid freight bill, thereby enabling purchaser to secure prompt payment of claim. Concealed damage should be reported immediately to transportation company, allowing them to make inspection and necessary notation on freight bill.

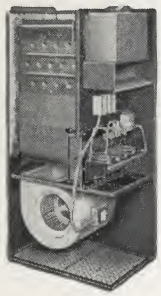
TAXES

To the prices and terms quoted add any manufacturers' or sales tax payable under any effective statute.

E. E. SOUTHER IRON CO.

1952 Kienlen Ave. **St. Louis 20, Missouri**

GAS FIRED UNITS



Series SH
Upflow Unit, showing
Sectional Steel Heating
Element

Series SH
Upflow Unit, showing low
Height, narrow Width and
shallow Depth

Series SH
Upflow Unit, showing
Return Air Cabinet
Installed at Rear

Bottom Return Air Intake supplied with Upflow Units.

Series SHC
Counterflow Unit,
Showing Front Panels
removed

Series SH, Upflow Winter Air Conditioning Units

(FACTORY ASSEMBLED AND WIRED)

Unit No.	Btu Input	A.G.A. Approved for Natural, Manufactured, Mixed and Liquefied Petroleum Gases Btu at Bonnet	Approximate Shipping Wt.—Lbs.	Net Dealer Price with Minneapolis-Honeywell Controls
SH-75-D	75,000	60,000	189	**$130.00**
SH-75	75,000	60,000	189	**139.00**
SH-100-D	100,000	80,000	222	**142.00**
SH-100	100,000	80,000	222	**151.00**
SH-125	125,000	100,000	275	**181.00**
SH-150	150,000	120,000	300	**219.00**
SH-175	175,000	140,000	436	**275.00**
SH-200	200,000	160,000	460	**296.00**

Return Air Cabinet for Basement Installation:

Unit Nos. SH-75-D and SH-75	**$8.00**
Unit Nos. SH-100-D and SH-100	**9.00**
Unit Nos. SH-125 and SH-150	**11.00**
Unit Nos. SH-175 and SH-200	**13.00**

Filter Frame for Side Air Intake:

Unit Nos. SH-75-D, SH-75, SH-100-D and SH-100	**1.50**
Unit Nos. SH-125 and SH-150	**3.00**
Unit Nos. SH-175 and SH-200	**3.00**

Unit Nos. SH-75-D and SH-100-D are supplied with Direct Drive Blowers. "D" suffix indicates Direct Drive Blower.

Series SHC, Counterflow Winter Air Conditioning Units

(FACTORY ASSEMBLED AND WIRED)

SHC-75-D	75,000	60,000	200	**$142.00**
SHC-100-D	100,000	80,000	250	**160.00**
SHC-100	100,000	80,000	250	**169.00**
SHC-125	125,000	100,000	281	**197.00**
SHC-150	150,000	120,000	320	**236.00**

Special Base for Combustible Floors:

Unit No. SHC-75-D	**$5.00**
Unit Nos. SHC-100-D, SHC-100 and SHC-125	**7.00**
Unit No. SHC-150	**11.00**

Unit Nos. SHC-75-D and SHC-100-D are equipped with Direct Drive Blowers. "D" suffix indicates Direct Drive Blower.

For substitution of No. TS86A (Round) Thermostat for No. TS88 (Cadet) Thermostat, Add to Net Dealer Price..... $2.21

STANDARD EQUIPMENT — SERIES SH AND SHC UNITS

Approved for A.G.A. Close Clearance at both sides and rear at no extra cost.

FOR ALL TYPES OF GASES:

1. Sectional Steel Heating Element
2. Steel Burners with Stainless Steel Ribbons.
3. Baked Enameled Casing
4. Blower and Motor
5. Disposable Filter
6. Built-in Draft Hood
7. No. TS88 Honeywell Cadet Thermostat
8. No. L4028 Honeywell Cadet Fan Switch
9. No. L4029 Honeywell Cadet Limit Switch
10. Blower Speed Controller for Units equipped with Direct Drive Blower
11. Camstat Blower Failure Safety Control for Counterflow Units Only

FOR NATURAL, MANUFACTURED AND MIXED GASES:

12. Main Manual Gas Valve
13. Pilot Manual Gas Valve
14. Automatic Pilot
15. Gas Pressure Regulator
16. Honeywell Powerpile Diaphragm Gas Valve and Pilot Generator

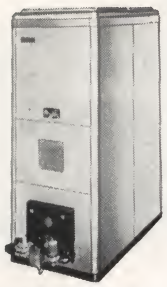
FOR LIQUEFIED PETROLEUM GAS:

12. No. T88 Honeywell Cadet Thermostat
13. Combination Automatic Pilot and Shut-off Valve for 100% Shut-off
14. Solenoid Gas Valve

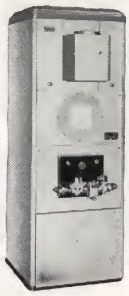
When ordering always specify: (1) Gas, (2) Btu Value, (3) Specific Gravity.

GAS FIRED UNITS

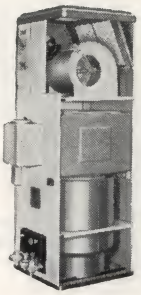
Series A
Basement Type Winter
Air Conditioning Unit
Rear Flue Outlet



Series A-E
Basement Type Winter
Air Conditioning Unit
Rear Flue Outlet



Series H
Utility Winter Air
Conditioning Unit
Front Flue Outlet



Series HC
Counterflow Winter Air
Conditioning Unit
Front Flue Outlet

Bottom Return Air Intake supplied with Utility Units

Series A and A-E, Basement Type Winter Air Conditioning Units

Unit Nos. A-105-ED, A-105-E and A-125-E are shipped with Heat Exchanger, Blower and Motor assembled in Casing. Other Series A Units are not assembled.

Unit No.	A.G.A. Approved for Natural, Manufactured, Mixed and Liquefied Petroleum Gas Btu Input	Btu at Bonnet	Btu at Register	Approx. Shipping Weight Lbs.	Net Dealer Price with Honeywell Controls
A-105-ED	105,000	84,000	71,400	324	**$174.00**
A-105-E	105,000	84,000	71,400	324	**183.00**
A-105-D	105,000	84,000	71,400	354	**177.50**
A-105	105,000	84,000	71,400	354	**186.50**
A-125-E	125,000	100,000	85,000	376	**219.00**
A-125	125,000	100,000	85,000	406	**225.00**
A-150	150,000	120,000	102,000	473	**266.00**
A-210	210,000	168,000	143,000	691	**338.00**
A-260	260,000	208,000	177,000	762	**416.50**

Wiring harness for Basement Units **$4.00**
Cover for Gas Manifold—Unit Nos. A-105-ED and A-105-E (Not available for use with Dual Fuel) **3.00**
Unit Nos. A-105-ED and A-105-D are supplied with Direct Drive Blowers. "D" suffix indicates Direct Drive Blower.

Series H, Utility Winter Air Conditioning Units

Shipped with Heating Element, Blower and Motor assembled in Casing.

H-100-ED	100,000	80,000	325	**$174.00**
H-100-E	100,000	80,000	325	**183.00**
H-115-E	115,000	92,000	385	**229.00**
H-140-E	140,000	112,000	438	**245.00**

Wiring harness for Utility Units **$4.00**
Cover for Gas Manifold—Nos. H-100-ED and H-100-E (Not available for use with Dual Fuel) **3.00**
Cover for Gas Manifold—Nos. H-115-E and H-140-E (Not available for use with Dual Fuel) **3.50**
Filter Frame for Side Air Intake **3.00**
Unit No. H-100-ED supplied with Direct Drive Blower. "D" suffix indicates Direct Drive Blower.

Series HC, Counterflow Winter Air Conditioning Units

Shipped with Heating Element, Blower and Motor assembled in Casing.

HC-100-ED	100,000	80,000	325	**$179.00**
HC-100-E	100,000	80,000	325	**187.00**
HC-115-E	115,000	92,000	377	**234.50**
HC-140-E	140,000	112,000	448	**250.00**

Wiring harness for Counterflow Units **$3.00**
Cover for Gas Manifold—Unit Nos. HC-100-ED and HC-100-E (Not available for use with Dual Fuel) **3.00**
Cover for Gas Manifold—Nos. HC-115-E and HC-140-E (Not available for use with Dual Fuel) **3.50**
Special Base for Combustible Floors, Nos. HC-100-ED, and HC-100-E ..... **$7.00** **Nos. HC-115-E and HC-140-E** **8.50**
Unit No. HC-100-ED supplied with Direct Drive Blower. "D" suffix indicates Direct Drive Blower.

For Utility and Counterflow Gas Units with A. G. A. Close Clearance Labels, except Series SH and SHC, add to Net Dealer Price $5.00

STANDARD EQUIPMENT—SERIES A, A-E, H AND HC UNITS

FOR ALL TYPES OF GAS:

1. Cylindrical Steel Heating Element
2. Single-Port Burner
3. Baked Enameled Casing
4. Blower and Motor
5. Disposable Filter
6. Draft Hood
7. No. T86A Honeywell Thermostat
8. No. L498A Honeywell Fan and Limit Switch
9. Camstat Blower Failure Safety Control for Counterflow units only
10. Blower Speed Controllers for Units equipped with Direct Drive Blowers

FOR NATURAL, MANUFACTURED AND MIXED GASES:

11. Combination Gas Pressure Regulator and Automatic Pilot*
12. Main Shut-off Gas Valve
13. Pilot Shut-off Gas Valve
14. Honeywell No. VA835A Solenoid Valve

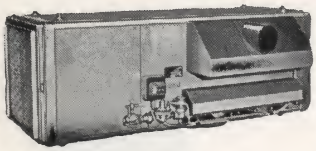
FOR LIQUEFIED PETROLEUM GAS:

11. Combination Automatic Pilot and Shut-off Valve for 100% shut-off
12. Solenoid Gas Valve

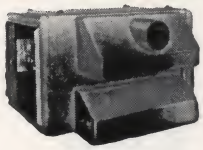
*Except Nos. A-210 and A-260, which have separate Gas Regulator and Automatic Pilot.

When ordering always Specify (1) Gas, (2) Btu Value, (3) Specific Gravity.

GAS FIRED UNITS



Series Y
Gas Horizontal Furnace



Series D
Duct Furnace

No. G-86 Steel
Gravity Furnace
Rear Flue Outlet

No. G-110
and G-135 Steel
Gravity Furnace
Rear Flue Outlet

Series Y, Horizontal Gas Fired Furnaces (Factory Assembled and Wired)

Unit No.	A.G.A. Approved for Natural, Manufactured, Liquefied Petroleum and Mixed Gas — Btu Input	Btu at Bonnet	Approximate Shipping Weight Lbs.	Net Dealer Price with Honeywell Controls
Y-80-ED	80,000	64,000	354	**$163.00**
Y-80-E	80,000	64,000	354	**171.00**
Y-100-ED	100,000	80,000	360	**175.00**
Y-100-E	100,000	80,000	360	**183.00**
Y-120-E	120,000	96,000	424	**222.00**
Y-140-E	140,000	112,000	440	**235.00**

Unit Nos. Y-80-ED and Y-100-ED are supplied with Direct Drive Blowers. "D" suffix indicates Direct Drive Blower.

STANDARD EQUIPMENT—HORIZONTAL FURNACES

FOR ALL TYPES OF GASES:

1. Sectional Steel Heating Element
2. Slotted Port Steel Burners
3. Baked Enameled Casing
4. Blower and Motor
5. Disposable Filter
6. Draft Hood
7. No. T86A Honeywell Thermostat
8. No. L498A Honeywell Fan and Limit Switch
9. Blower Speed Controller for Units equipped with Direct Drive Blower

FOR NATURAL, MANUFACTURED AND MIXED GASES:

10. Main Manual Gas Valve
11. Pilot Manual Gas Valve
12. Automatic Pilot
13. Honeywell No. VA835A Gas Valve
14. Gas Pressure Regulator

FOR LIQUEFIED PETROLEUM GAS:

10. Combination Automatic Pilot and Shut-off Valve for 100% Shut-off
11. Solenoid Gas Valve

Series D, Gas Fired Duct Furnaces (Factory Assembled and Wired)

D-80	80,000	64,000	246	**$134.00**
D-100	100,000	80,000	262	**147.00**
D-120	120,000	96,000	322	**155.00**
D-140	140,000	112,000	348	**168.00**

BLOWER WITH MOUNTING PLATE

No. A9-3 or A-9 Blower, 1/6 H. P. Motor	**$50.00**	No. A-10 Blower, 1/4 H. P. Motor	**$52.00**
No. A9-3 Blower, 1/4 H. P. Motor	**51.00**	No. A-10 Blower, 3/4 H. P. Motor	**83.00**
No. A-9 Blower, 1/3 H. P. Motor	**54.00**	(Pulleys and Belt only included)	

STANDARD EQUIPMENT—DUCT FURNACES

FOR ALL TYPES OF GASES:

1. Sectional Steel Heating Element
2. Slotted Port Steel Burners
3. Baked Enameled Casing
4. Draft Hood
5. No. T88 Honeywell Cadet Thermostat
6. No. L498A Honeywell Fan and Limit Switch

FOR NATURAL, MANUFACTURED AND MIXED GASES:

7. Main Manual Gas Valve
8. Pilot Manual Gas Valve
9. Automatic Pilot
10. Honeywell No. VA835A Gas Valve and Transformer
11. Gas Pressure Regulator

FOR LIQUEFIED PETROLEUM GAS:

7. Combination Automatic Pilot and Shut-off Valve for 100% Shut-off
8. Solenoid Gas Valve

Series G, Gravity Furnaces

Nos. G-86 and G-110 are shipped with Heating Element assembled in Casing. No. G-135 is not assembled.

Unit No.	A.G.A. Approved for Natural, Mfd., Mixed and Liquefied Petroleum Gas — Btu Input	Btu at Bonnet	Btu at Register	Approx. Shipping Weight Lbs.	Net Dealer Price with Honeywell Controls
G-86	86,000	64,500	54,800	235	**$117.50**
G-110	110,000	82,500	70,125	316	**140.50**
G-135	135,000	101,250	86,000	341	**161.50**

STANDARD EQUIPMENT—GRAVITY FURNACES

FOR ALL TYPES OF GASES:

1. Cylindrical Steel Heating Element
2. Single-Port Burner
3. Baked Enameled Casing
4. Draft Hood
5. No. TS88 Honeywell Cadet Thermostat
6. Thermodisc Limit Switch

FOR NATURAL, MANUFACTURED AND MIXED GASES:

7. Gas Pressure Regulator
8. Main Shut-off Gas Valve
9. Pilot Shut-off Gas Valve
10. Automatic Pilot
11. Honeywell Powerpile Gas Valve and Pilot Generator

FOR LIQUEFIED PETROLEUM GAS:

6. No. T88 Honeywell Thermostat
7. Combination Automatic Pilot and Shut-off Valve for 100% Shut-off
8. Solenoid Gas Valve

SPECIAL REQUIREMENTS FOR GAS FIRED FURNACES

DUAL FUEL: For substitution of Dual Fuel Controls—Natural Gas to Liquefied Petroleum Gas, including Outdoor Changeover Control, add to Net Dealer Price (For all units except Unit Heaters, SH and SHC Series.) **$36.00**

No. SH-75-D, SH-75, SHC-75-D, SH-100-D, SH-100, SHC-100-D or SHC-100 ..... **$41.50**

No. SH-125 or SHC-125 ..... **$42.50**; No. SH-150 or SHC-150 ..... **$46.50**; No. SH-175 or SH-200 ..... **$50.00**

For substitution of Honeywell No. L498B Combination Fan and Limit Switch with Manual Fan Switch, Add to Net Dealer Price (For all units except Unit Heaters, SH and SHC Series) **$1.00**

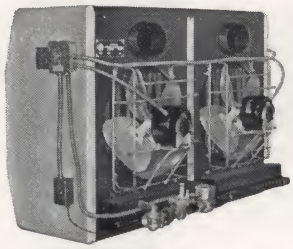
SUPPLEMENTARY UTILITY REQUIREMENTS FOR EASTERN MANUFACTURED GAS

Manual Push Button Pilot Lighter (Except Horizontal Furnaces, SH and SHC Series) **$5.50**

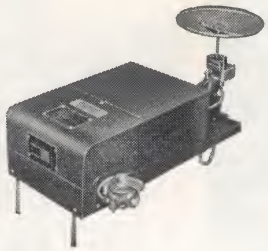
When ordering always specify: (1) Gas, (2) BTU Value, (3) Specific Gravity.

GAS FIRED UNITS

Series XX Unit Heater
Front View of Nos. XX-60, XX-90 and XX-120 with Single Heating Element



Series XX Unit Heater
Rear View of Nos. XX-180 and XX-240 with Twin Heating Elements



Series Z
Gas Conversion Burner
50,000 to 310,000 Btu Input

Series IN Incinerators:
(1) Gasless
(2) Dehydrator
(3) Manual Shut-off
(4) Automatic Shut-off

Series XX, Gas Fired Unit Heaters (Factory Assembled and Wired)

Unit No.	A.G.A. Approved for Natural, Manufactured, Mixed and Liquefied Petroleum Gas — Btu Input	Btu Output	Approx. Shipping Wt.—Lbs.	Net Dealer Price — With 24 Volt Controls—Includes Thermostat	Net Dealer Price — With 115 Volt Controls—Does Not Include Thermostat
XX-60	60,000	48,000	123	**$127.50**	**$104.00**
XX-90	90,000	72,000	150	**145.00**	**120.00**
XX-120	120,000	96,000	190	**166.00**	**142.00**
XX-180	180,000	144,000	304	**243.50**	**219.50**
XX-240	240,000	192,000	374	**282.50**	**258.50**

115 Volt Controls will be shipped unless 24 Volt are specified.

Camstat Fan Switch for use with Unit Heater	**$6.00**
Camstat Thermostat (for control of 1 to 4 Unit Heater Fan Motors)	**7.20**
No. T44A Honeywell Thermostat (for control of Single Unit Heater)	**12.11**
No. TA42A Honeywell Thermostat (for control of one to four Unit Heater Motors)	**16.76**
No. T88 Honeywell Thermostat (for 24 Volt Controls)	**7.01**

STANDARD EQUIPMENT—UNIT HEATERS

FOR ALL GASES:
1. Baked Enameled Casing
2. Pipe Bushings for Hanging Unit
3. Sectional Steel Heating Element
4. Draft Hood built into Heating Element
5. Multi-port Ribbon Burners
6. Propeller Type Fan and Motor
7. Limit Switch
8. Main Manual Gas Valve
9. Pilot Manual Gas Valve
10. Automatic Pilot
11. Combination Gas Pressure Regulator and Pilot Safety Valve, or Gas Pressure Regulator and Pilot Safety Switch
12. Automatic Gas Valve

FOR LIQUEFIED PETROLEUM GAS:
10. Combination Automatic Pilot and Shut-off Valve for 100% Shut-off
12. Solenoid Gas Valve

FOR 24 VOLT CONTROLS:
12. Low Voltage Gas Valve
13. Transformer
14. No. T88 Honeywell Plain Thermostat
15. Fan Switch

Series Z, Gas Conversion Burners

Unit No.	Max. A.G.A. Btu Input — Nat., Mfd., or Mixed Gas	Max. A.G.A. Btu Input — Liquefied Petroleum Gas	Max. Grate Area Sq. Ft.	Approx. Ship. Weight Lbs.	Net Dealer Price
Z-145	145,000	**145,000	3.0	20	**$56.50**
Z-210	210,000	*	4.0	31	**61.00**
Z-310	310,000	**270,000	6.0	45	**69.50**

*Not approved or available for L. P. Gas.

STANDARD EQUIPMENT—CONVERSION BURNERS

FOR NATURAL AND MIXED GASES:
1. Baked Enameled Case
2. Adjustable Mounting Legs
3. Single-Port Gas Burner
4. Plain Thermostat
5. Main Manual Gas Valve
6. Pilot Manual Gas Valve
7. Self-Generating Automatic Pilot
8. Gas Pressure Regulator
9. Automatic Gas Valve

★FOR MANUFACTURED GAS:
10. Pilot Line Gum Filter

★★FOR LIQUEFIED PETROLEUM GAS:
7. Combination Automatic Pilot and Shut-off Valve for 100% Shut-off
9. Solenoid Gas Valve

★FOR MANUFACTURED GAS add to Net Dealer Price	**$7.00**
★★FOR LIQUEFIED PETROLEUM GAS add to Net Dealer Price	**4.00**
Manual Push Button Lighter for use with Conversion Burner	**5.50**

Series IN, Incinerators

Unit No.	Type	Btu Input Nat., Mfd., Mixed Gas	Flue Size	Shipping Weight Pounds	Net Dealer Price
No. IN	Gasless	None	6″	175	**$48.00**
No. IN-2	Constant Burning	2,000	6″	180	**56.00**
No. IN-12	Manual Operation	12,000	6″	180	**$67.00**
No. IN-12-T	Automatic	12,000	6″	180	**76.00**

STANDARD EQUIPMENT—INCINERATORS

No. IN (Gasless)
1. Factory Assembled Unit, including:
2. Enameled Casing
3. Rocker Arm and Dumping Grates
4. Ash Drawer
5. Legs

No. IN-2 (Dehydrator)
6. No. IN Incinerator, plus:
7. 2,000 Btu Input Constant-Burning Gas Burner
8. Manual Shut-off Valve

No. IN-12 (Manual Operation)
6. No. IN Incinerator, plus:
7. 12,000 Btu Input Gas Burner
8. Combination Manual Shut-off Valve and Pilot Safety Valve with 100% Shut-off
9. Gas Pressure Regulator

No. IN-12-T (Automatically Timed)
6. No. IN Incinerator, plus:
7. 12,000 Btu Input Gas Burner
8. Combination Manual Shut-off Valve and Pilot Safety Valve with 100% Shut-off
9. Gas Pressure Regulator
10. Timer-Operated Automatic Shut-off Valve

Incinerators do not carry the A. G. A. Approval Seal.

When ordering always specify: (1) Gas, (2) BTU Value, (3) Specific Gravity.

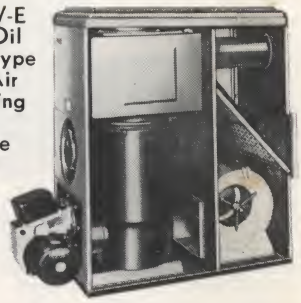
OIL BURNING UNITS

Series HO, Oil Upflow Winter Air Conditioner

Series HO, showing interior construction with Refractory Firebox installed

Series HOC, Oil Counterflow Winter Air Conditioner

Series OW or O, Oil Basement Type Winter Air Conditioning Unit Rear Flue Outlet



Series OW-E or O-E, Oil Basement Type Winter Air Conditioning Unit Rear Flue Outlet

Bottom Return Air Intake supplied with Upflow Units.

Series HO, Oil Fired Upflow Winter Air Conditioning Units

COMPLETELY ASSEMBLED AND WIRED WITH OIL BURNER, CONTROLS AND REFRACTORY FIREBOX INSTALLED

Unit No.	Btu Input at Burner	Rated in accordance with U. S. Dept. of Commerce Commercial Standard No. CS-195 Gallons per Hour	Btu at Bonnet	Approximate Shipping Wt. Lbs. Complete with Burner	Net Dealer Price Unit Complete with Honeywell Controls
HO-79-D	98,000	0.70	78,400	296	**$217.00**
HO-79	98,000	0.70	78,400	296	**226.00**
HO-112	140,000	1.00	112,000	385	**271.00**

Return Air Cabinet for Basement Installation, Nos. HO-79-D and HO-79 ..... $11.00; No. HO-112 ..... $12.50
Filter Frame for Side Air Intake, Nos. HO-79-D and HO-79 ..... $1.50; No. HO-112 ..... 3.00
Unit No. HO-79-D is supplied with Direct Drive Blower. "D" suffix indicates Direct Drive Blower.

Series HOC, Oil Fired Counterflow Winter Air Conditioning Units

COMPLETELY ASSEMBLED AND WIRED WITH OIL BURNER, CONTROLS AND REFRACTORY FIREBOX INSTALLED

HOC-79-D	98,000	0.70	78,400	292	**$245.00**
HOC-79	98,000	0.70	78,400	292	**254.00**

Special Base for Combustible Floors $7.00
Unit No. HOC-79-D is supplied with Direct Drive Blower. "D" suffix indicates Direct Drive Blower.

Series OW and OW-E, Oil Fired Basement Type Winter Air Conditioning Units

COMPLETELY ASSEMBLED AND WIRED WITH OIL BURNER, CONTROLS AND REFRACTORY FIREBOX INSTALLED

Unit No.	Btu. Input at Burner	Rated in Accordance with U. S. Dept. of Commerce Commercial Standard No. CS-195 Gallons per Hour	Btu. at Bonnet	Btu. at Register	Approximate Shipping Wt. Lbs. Complete with Burner	Net Dealer Price Unit Complete with Honeywell Controls
OW-72-ED	105,000	0.75	84,000	71,400	376	**$235.00**
OW-72-E	105,000	0.75	84,000	71,400	386	**243.00**
OW-72-D	105,000	0.75	84,000	71,400	392	**244.00**
OW-72	105,000	0.75	84,000	71,400	402	**252.00**
OW-82-E	119,000	0.85	95,000	80,750	386	**246.00**
OW-82	119,000	0.85	95,000	80,750	402	**255.00**
OW-95-E	140,000	1.00	112,000	95,200	440	**267.00**
OW-95	140,000	1.00	112,000	95,200	458	**280.00**

Cover for concealing Oil Burner — Nos. OW-72-ED, OW-72-E, OW-82-E and OW-95-E $5.50
Unit Nos. OW-72-ED and OW-72-D are supplied with Direct Drive Blower. "D" suffix indicates Direct Drive Blower.

STANDARD EQUIPMENT - SERIES HO, HOC, OW-E and OW UNITS

Underwriters' Listed for Less than Standard Clearances at No Additional Cost—Only When so Ordered

1. Steel Heating Element
2. Baked Enameled Casing
3. Blower and Motor
4. Disposable Filter
5. No. T88 Honeywell Cadet Thermostat
6. No. L4028 Honeywell Cadet Fan Switch
7. No. L4029 Honeywell Cadet Limit Switch
8. Blower Speed Controller for Units equipped with Direct Drive Blower, except No. HOC-79-D
9. Camstat Blower Safety Control for Counterflow Units
10. PerfXray Primary Control
11. Draft Stabilizer
12. Wayne Oil Burner, Gun-Type
13. Refractory Firebox

For Substitution of No. T86A (Round) Thermostat for No. T88 (Cadet) Thermostat, Add to Net Dealer Price $2.01

Series O and O-E, Oil Fired Basement Type Winter Air Conditioning Units

Unit Nos. O-71-ED, O-71-E and O-86-E ONLY are shipped with Heating Element, Blower and Motor assembled in Casing.

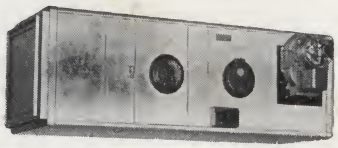
Unit No.	Btu Input at Burner	Rated in Accordance with U. S. Dept. of Commerce Commercial Standard No. CS-195 Gallons per Hour	Btu at Bonnet	Btu at Register	Approximate Shipping Wt. Lbs. Complete with Burner	Net Dealer Price Unit Complete with Honeywell Controls With Series OCU Oil Burner	With Wayne Oil Burner
O-71-ED	105,000	.75	84,000	71,400	399	**$251.00**	**$243.00**
O-71-E	105,000	.75	84,000	71,400	399	**260.00**	**252.00**
O-71-D	105,000	.75	84,000	71,400	437	**256.50**	**248.50**
O-71	105,000	.75	84,000	71,400	437	**265.50**	**257.50**
O-86-E	126,000	.90	100,800	85,700	467	**283.50**	**275.50**
O-86	126,000	.90	100,800	85,700	500	**289.00**	**281.00**
O-114	168,000	1.20	134,500	114,000	590	**353.00**	**345.00**
O-158	231,000	1.65	185,000	157,000	818	**428.00**	**420.00**
O-192	280,000	2.00	224,000	191,000	910	**511.50**	**503.50**

Wiring harness for Series O Basement Type Units—Net Dealer Price $7.50
Cover for concealing Oil Burner—Unit Nos. O-71-ED, O-71-E and O-86-E 5.50
Unit Nos. O-71-ED and O-71-D are supplied with Direct Drive Blowers. "D" suffix indicates Direct Drive Blower.

OIL BURNING UNITS

Series OH, Oil Utility Unit Front Flue Outlet

Series OHC, Oil Counterflow Unit Front Flue Outlet



Series OY Horizontal Oil Furnace Also available assembled with blower at right end, so that burner can be installed at left end—when specifically ordered, only.

Series OG Oil Gravity Furnace Rear Flue Outlet

Series OH, Oil Fired Utility Units

Shipped with Heating Element, Blower and Motor assembled in Casing

Unit No.	Rated in Accordance with U. S. Dept. of Commerce Commercial Standard No. CS-195 Btu Input at Burner	Gallons per Hour	Btu at Bonnet	Btu at Register	Approximate Shipping Wt. Lbs. Complete with Burner	Net Dealer Price Unit Complete with Honeywell Controls With Series OCU Oil Burner	With Wayne Oil Burner
OH-85-ED	105,000	.75	84,000		404	**$249.50**	**$241.50**
OH-85-E	105,000	.75	84,000		404	**258.50**	**250.50**
OH-101-E	126,000	.90	100,800		476	**301.50**	**293.50**
OH-123-E	154,000	1.10	123,200		549	**334.00**	**326.00**

Wiring harness for Series OH Utility Units—Net Dealer Price **$7.00**
Cover for concealing Oil Burner **5.50**
Filter Frame or Side Air Intake **3.00**
Unit No. OH-85-ED is supplied with Direct Drive Blower. "D" suffix indicates Direct Drive Blower.

Series OHC, Oil Fired Counterflow Units

Shipped with Heating Element, Blower and Motor assembled in Casing

OHC-85-ED	105,000	.75	84,000	402	**$253.50**	**$245.50**
OHC-85-E	105,000	.75	84,000	402	**262.50**	**254.50**
OHC-101-E	126,000	.90	100,800	468	**305.50**	**297.50**
OHC-123-E	154,000	1.10	123,200	560	**339.50**	**331.50**

Wiring harness for Series OHC Counterflow Units—Net Dealer Price **$5.50**
Cover for concealing Oil Burner **5.50**
Special Base for Combustible Floors, Nos. OHC-85-ED and OHC-85-E ..... **$7.00**; **Nos. OHC-101-E and OHC-123-E** **8.50**
Unit No. OHC-85-ED is supplied with Direct Drive Blower. "D" suffix indicates Direct Drive Blower.

Series OY, Oil Fired Horizontal Furnace

Shipped with Heating Element, Blower and Motor assembled in Casing. No. OY-224-E has Unassembled Blower Compartment.

OY-85-ED	105,000	.75	84,000	421	**$249.50**	**$241.50**
OY-85-E	105,000	.75	84,000	421	**258.50**	**250.50**
OY-101-E	126,000	.90	100,800	490	**302.50**	**294.50**
OY-123-E	154,000	1.10	123,200	588	**344.00**	**336.00**
OY-224-E	280,000	2.00	224,000	899	**512.50**	.....

Wiring harness for Series OY Horizontal Units—Net Dealer Price **$6.00**
Unit No. OY-85-ED is supplied with Direct Drive Blower. "D" suffix indicates Direct Drive Blower.

STANDARD EQUIPMENT—SERIES O, O-E, OH, OHC and OY UNITS

1. Steel Heating Element
2. Baked Enameled Casing
3. Blower and Motor
4. Disposable Filters
5. Blower Failure Safety Control for Counterflow and Horizontal Units
6. Series OCU or Wayne Gun Type Oil Burner, as ordered. Except ONU Burner with No. OY-224-E.
7. No. T86A Honeywell Thermostat
8. No. L498A Honeywell Combination Fan and Limit Switch
9. Precast Firebox
10. Draft Stabilizer
11. No. RA816A Honeywell Stack Switch, Constant Ignition

Series OG, Oil Fired Gravity Furnace

Unit No. OG-72 ONLY is shipped with Heating Element assembled in Casing.

OG-72	112,000	.80	84,000	71,400	409	**$230.50**	**$222.50**
OG-98	154,000	1.10	115,500	98,175	458	**259.50**	**251.50**

Cover for Concealing Oil Burner **$5.50**

STANDARD EQUIPMENT—SERIES OG GRAVITY FURNACES

1. Steel Heating Element
2. Baked Enameled Casing
3. Series OCU or Wayne Gun Type Oil Burner, as ordered.
4. No. RA816A Honeywell Stack Switch, Constant Ignition
5. No. T86A Honeywell Thermostat
6. Thermodisc Limit Switch
7. Precast Firebox
8. Draft Stabilizer

Add $5.00 to above Unit Complete prices when oil burner is ordered with a two-stage fuel pump.
Add $3.30 to above prices when Intermittent Ignition Stack Switch is substituted for Constant Ignition.

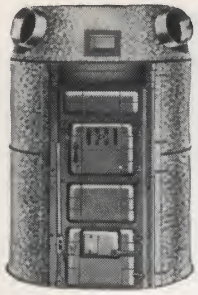
For Series O Units with Underwriters Label, or for less than Standard Clearance (Available only for Units with Belt Driven Blower) add to Net Dealer Price **$9.00**

Temperature Controls

	NET DEALER PRICE
No. T86A or TS86A Honeywell Plain Thermostat	$ 9.71
No. TS88 Honeywell Cadet Plain Thermostat	7.50
No. T88 Honeywell Cadet Plain Thermostat	7.70
No. L4028 Honeywell Cadet Fan Switch	8.03
No. L4029 Honeywell Cadet Limit Switch	7.73
No. Y219A Honeywell Electric Janitor Package (T824A Thermostat, M828A Damper Motor)	27.00
No. LA419A Honeywell Limit Switch	8.36
No. LA412A Honeywell Blower Switch	8.93
No. L498B Honeywell Combination Limit and Blower Switch with Manual Fan Switch	14.43

	NET DEALER PRICE
No. L498A Honeywell Combination Limit and Blower Switch without Manual Fan Switch	$13.43
No. T852A Chronotherm	34.91
No. RA816A Honeywell Protectorelay (Continuous)	30.00
No. RA817A Honeywell Protectorelay (Intermittent)	33.30
No. T44A Honeywell Thermostat for use with Unit Heaters. (For control of single Unit Heater Motor)	12.11
No. TA42A Honeywell Thermostat for use with Unit Heaters. (For control ot one to four Unit Heater Motors)	16.76
Camstat Thermostat (For control of one to four Unit Heater Motors)	7.20
Camstat Fan Switch (For use with Unit Heater)	6.00
No. CD123A Camstat Limit Switch (For use with Unit Heater)	5.50

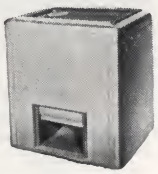
COAL BURNING UNITS



Series 600 Coal-Fired, Steel Gravity Furnace

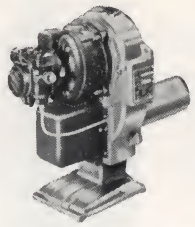
Series A. C. 700-F, Steel Coal Fired Winter Air Conditioning Unit

BLOWER-FILTER UNITS

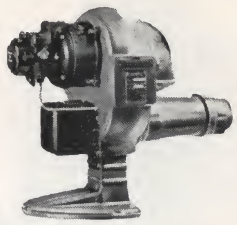


Blower-Filter Unit

OIL CONVERSION BURNERS



Conversion Oil Burners Series "OC": 0.75-2.00 Gallons
Series "ON": 1.65-3.00 Gallons



Conversion Oil Burners Series "M": 2.50-6.00 Gallons
Series "L": 4.00—13.00 Gallons

Series 600 Gravity, Steel, Coal Burning - Hand Fired (Round Casing)

Furnace Number	Drum Diameter	Rating in B.T.U. at Register *Soft Coal	Rating in B.T.U. at Register Hard Coal or Coke	For Omission of Grate Assembly and Ash Pit Door Deduct	Approximate Shipping Weight Furnace Only	Approximate Shipping Weight Furnace Complete	Net Dealer Price Furnace Only	Net Dealer Price Casing and Hood	Net Dealer Price Complete with Casing and Hood
620	20″	68,276	51,114	$3.45	632	710	$139.75	$17.25	**$157.00**
622	22″	75,202	63,809	4.20	670	765	172.00	19.00	**191.00**
624	24″	94,123	78,509	4.65	796	898	188.50	22.50	**211.00**
627	27″	100,585	100,585	4.90	861	966	228.50	25.50	**254.00**

STANDARD EQUIPMENT FOR COAL GRAVITY FURNACES: Check Damper, Poker, Draft Regulator, Chain and Pulleys, Furnace Cement.

*To convert square inch requirements into B.T.U. requirements at register, use the following formulae: Multiply square inch requirements of the first floor by 111. Multiply square inch requirements of second floor by 167. Add the totals.

Series A. C. 700-F, Steel - Coal Burning - Hand Fired

Furnace Number	Drum Diameter	Rating B.T.U. Capacity at Register *Soft Coal Stoker or Oil	Rating B.T.U. Capacity at Register Hard Coal or Coke	For Omission of Grate Assembly & Ashpit Door Deduct	Approximate Shipping Weight	Net Dealer Price with Enameled Casing
AC-722-F	22″	95,424	81,045	$4.20	971	**$290.50**
AC-724-F	24″	119,433	99,715	4.65	1093	**333.50**
AC-727-F	27″	127,633	127,633	4.90	1169	**390.50**

NOTE—Blower compartment can be attached to either side of heating compartment.

STANDARD EQUIPMENT—COAL WARM AIR CONDITIONING UNITS

1. Steel Heating Element
2. Outer Casing
3. Inner Casing
4. Blower
5. Belt and Pulleys
6. Air Filters
7. Motor

*Ratings are in accordance with Rating Formula of the National Warm Air Heating and Air Conditioning Association, effective Jan. 1, 1945

Blower-Filter Units

Blower Unit Complete with Baked Enamel Casing, Filters and Motor

Unit No.	Diameter of Wheel	C.F.M. at 0.25″ E.S.P.	Motor H.P.	Diameter of Pulley	Number of Filters	Approximate Shipping Wt.	Net Dealer Price
A-10	10⅝″	1300	1/6	8″	2(16x20″)	112	**$ 80.50**
A-12	12⅝″	2200	1/4	10″	1(16x25″) 1(20x25″)	132	**101.50**

STANDARD EQUIPMENT: All units are completely equipped with blower, variable speed motor pulley, blower pulley, belt, filters and cabinet, finished in baked enamel. All motors are for 115 volt single phase 60 cycle current.

Humidifying Equipment

	NET DEALER PRICE
Skuttle No. 450 Automatic Humidifier	$10.50
Thermo-Drip Automatic Humidifier	7.50
No. 10 Humidifier Pan, size 7″ x 28″ (Pan has Porcelain Enamel Finish)	2.00
No. 46 Automatic Float Control with fittings	2.75

Conversion Oil Burner, Gun Type

With Optional Air Tubes and Controls—.75 to 13 G. P. H.

G.P.H. Rating	Burner Series	Approx. Shipping Wt. Lbs.	Net Dealer Price Honeywell Controls	OPTIONAL AIR TUBES Including Nozzle: G.P.H. Nozzle	Usable Length "A" 8″	13″	17″	Standard Nozzle*
.75 to 2.0	"OC"	72	**$115.00**	.75 to 1.00	138-8CS	138-13CS	138-17CS	.85-80°
				1.00 to 1.40	118-8CS	118-13CS	118-17CS	1.35-80°
				1.50 to 2.00	108-8CS	108-13CS	108-17CS	1.65-80°
1.65 to 3.0	"ON"	90	**130.00**	1.65 to 3.00	N108-8CS	N108-13CS	N108-17CS	2.5-45°
					9″	15″	19″	
2.5 to 6.0	"M"	110	**160.00**	2.5 to 6.0	M139-9	M139-15	M139-19	5.0-45°
4.0 to 13.0	"L"	120	**190.00**	4.0 to 13.0	L143-9	L143-15	L143-19	(2) 4.0-45°

PRECAST FIREBOX No.	Capacity—Gallons Per Hr.	Ship'g Wt. Lbs.	Net Dealer Price
75	.75 to .85	26	$9.00
76	.75 to .85	26	9.00
81	.75 to .85	42	9.00
82	.85 to 1.35	42	9.00
100	.85 to 1.35	56	13.00
101	.85 to 1.35	44	12.00
110	.85 to 1.35	68	13.00
125	1.0 to 1.25	72	14.00
165	1.50 to 1.75	88	16.00
200	2.00	88	18.00
201	2.00	75	13.00
210	2.00	88	18.00

STANDARD EQUIPMENT: No. T86A Honeywell Thermostat, No. RA816A Honeywell Continuous Ignition Relay, No. LA419A Honeywell (Air) Limit Switch for Burners to 7.0 G.P.H. Single-Stage Fuel Pump for "OC" and "ON" Burners; Two-Stage for "M" and "L" Burners.

OPTIONAL EQUIPMENT:

For substitution of No. RA817A Honeywell Intermittent Ignition Relay, Add to Net Dealer Price	**$ 3.30**
For substitution of No. LA409A Honeywell (Water) Limit Control for No. LA419A (Air), Add to Net Dealer Price	**1.28**
For substitution of No. RA890C15 Honeywell Electronic Control System, with No. Q174A Photocell Mounting, for "ON", "M" and "L" Burners, Add to Net Dealer Price	**50.00**
Two-Stage Fuel Pump for "OC" or "ON" Burners	**5.00**
Air Tube and Electrode Assembly with Nozzle for "OC" or "ON" Burner	**8.25**
Pedestal and Louver Kit for "OC" or "ON" Burner to convert Plate Mounted Burner to Pedestal Mounted Burner	**4.50**
Standard Nozzle furnished unless otherwise specified. Nozzle with Strainer available only in packages of 5, each Nozzle	**1.00**

Additional Burner and Controls information furnished on request.

Printed in U.S.A. 1592

No. 285

Southaire

gas fired
winter air conditioners

A.G.A. Approved for Natural, Manufactured, Mixed or Liquefied Petroleum Gas.

COMPLIES WITH NATIONAL SAFETY REQUIREMENTS · AMERICAN GAS ASSOCIATION · APPROVED ·

E. E. SOUTHER IRON CO.

1952 Kienlen Ave. St. Louis 20, Missouri

Southaire

New compactness . . . with distinctive good looks

This totally new Winter Air Conditioner is an outstanding achievement in furnace design. It is as attractive to look at as it is advanced in construction.

The gas manifold, burners, controls and draft diverter are completely concealed and out of sight. Yet, removal of the front cabinet panels brings every operating part within easy reach.

Every model is approved for close clearance installation at the sides and at the rear and can be installed equally well in the basement, utility room or a closet.

Every model is readily adaptable for year 'round air conditioning, because provision is made to install extra blower capacity, as needed, when a cooling coil is added. All units can be operated with maximum air delivery at higher than usual external static pressures.

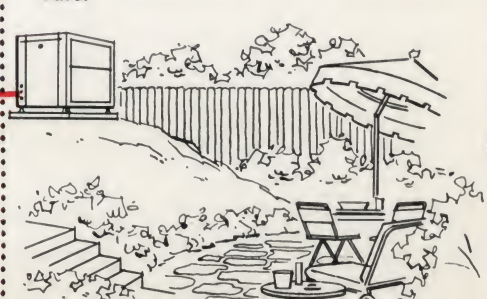
And when a cooling coil is installed at the top of this low furnace, plenty of space is left over for connection of ducts.

View of Winter Air Conditioner, above, illustrates the over-all compactness of the unit. The attractive two-tone grey baked enamel finish blends with any room setting.

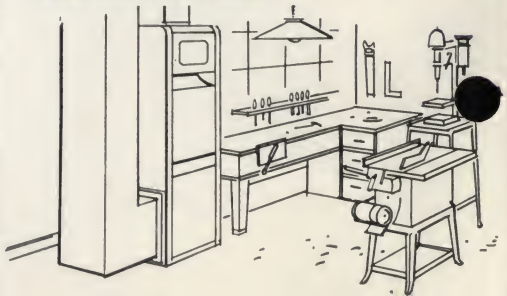
View of Winter Air Conditioner, at left, shows the optional Return Air Cabinet attached to the back of the unit. This cabinet, which matches the furnace in construction and finish, houses the filter and provides top connection for the return air plenum.

Basement installation of the Winter Air Conditioner shows return air plenum attached to Return Air Cabinet at rear. Add-On Cooling Coil installed in discharge plenum

—and connected with copper refrigerant tubing to an Air Cooled Compressor-Unit, installed out-of-doors on a poured concrete base.



Basement Installation of the Winter Air Conditioner illustrates return air entering through side by means of optional Air Intake and Filter Frame.



gas fired winter air conditioners

At right, Counterflow Unit with front cabinet panels removed, showing how the Blower is located above the Heating Element. Return Air is drawn into the furnace from the top, circulated over the Heating Element, and discharged from the bottom air discharge opening.

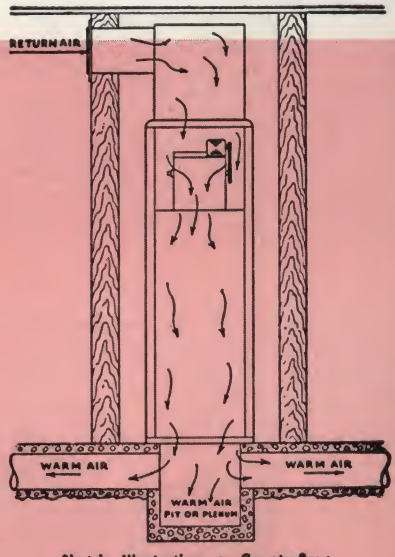
The Counterflow Unit for Basementless Homes

The Counterflow model of this unexcelled new Winter Air Conditioner is equally as compact, good looking and advanced in design as the Upflow Unit.

With the Counterflow Unit, air is circulated from the top to the bottom, rather than from the bottom to the top. This *downward* direction of air circulation makes the Counterflow Unit especially suited for installations in homes without a basement.

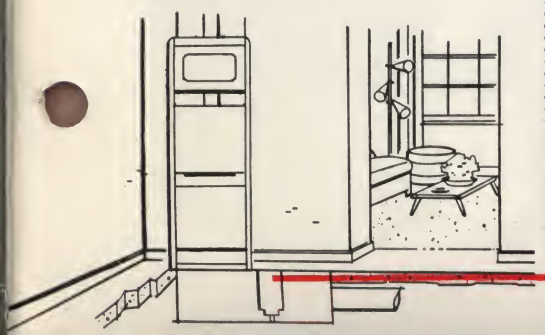
Heating ducts are located under the floor in a "crawl" space, or are imbedded in the concrete floor slab, so that the floor is warmed by the heated air as it is circulated to registers. In "perimeter" installations, the heating ducts lead to registers which are placed near or on outside walls.

Sketch shows method of installing the Counterflow Unit on a concrete slab floor, where heating ducts are buried in the slab. When the furnace is installed on a wood floor over a "crawl" space, an accessory Combustible Floor Frame and Base is used to separate the furnace from the floor.

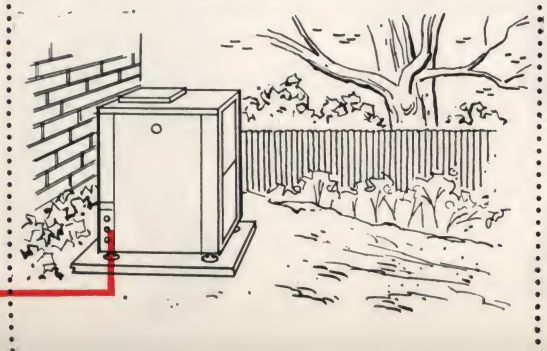


Sketch illustrating a Counterflow installation on a concrete floor slab.

Installation of the Counterflow Unit over a "crawl" space with Duct-type Cooling Coil installed in Air Discharge Plenum and connected with—



—copper refrigerant tubing to an Air Cooled Condensing Unit (compressor-condenser assembly) installed out-of-doors on a concrete slab.

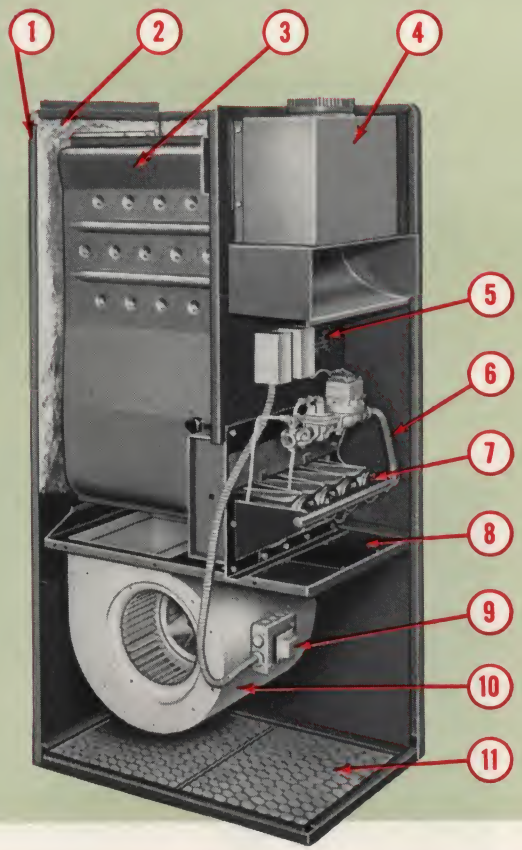


Installation of the Counterflow Unit in a utility alcove. Alcove door is vented so that air can enter to support combustion.

Southaire

OUTSTANDING

- Design
- Construction
- Operating Features



1. RIGID CABINET is sturdily constructed with rounded corners and has a durable, baked enamel finish.

2. INSULATION of aluminum-foil-faced glass fiber covers all cabinet walls which surround the heating element.

3. RUGGED STEEL HEATING ELEMENT is constructed of die-formed sections which are electrically welded to make a series of leak-proof and gas-tight chambers.

4. DRAFT DIVERTER is entirely enclosed within the cabinet.

5. DIVISION PANELS are easily removed to permit access to the heating element. Entire heating element can be taken out without removing the plenum chamber or the blower, or disturbing the cabinet sides.

6. ELECTRICAL BOX provides safe, convenient connection of outside wiring to the furnace. All interior wiring is performed at the factory.

7. GAS MANIFOLD is U-shaped so that controls are located above the burners and pilot for convenient adjustment.

8. GAS BURNERS are constructed with heat-and-corrosion-resistant stainless steel burner ribbons which are securely clamped into sealed steel burner tubes.

9. BLOWER PANEL slides out of cabinet to provide ready access to Blower and Motor, which are securely bolted to this panel.

10. BLOWER COMPARTMENT houses Blower and Motor and provides space for installation of Blower with increased motor horsepower, if needed, when cooling coil is installed in the heating system.

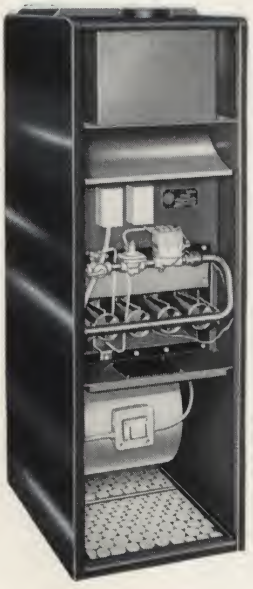
11. LARGE-AREA FILTER covers the entire bottom air intake opening. Bottom intake is standard for Upflow Units.

Blower and Heating Element are easily removed

At left, front cabinet panels, draft diverter, gas manifold, burners and division panels are removed to permit removal of the Heating Element. The Heating Element is independently supported so that it can be taken out without disturbing the cabinet sides and the blower, or detaching the plenum chamber.

At right, the blower access panel is removed to permit removal of the Blower and Motor assembly, which is bolted to this panel. The panel readily slides out of the cabinet on built-in rails, providing ready access to Blower.

gas fired winter air conditioners



- *Factory assembled and wired*
- *Bottom, side or rear air intake*
- *High air capacity for cooling*

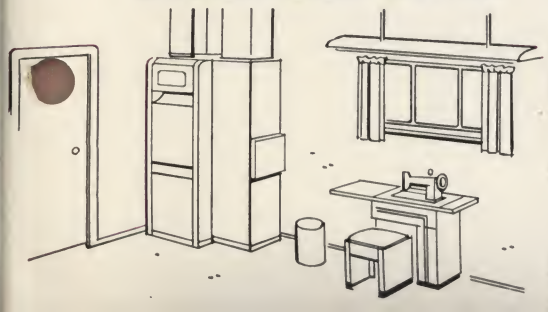
The Winter Air Conditioner is illustrated at left with all front cabinet panels removed, to reveal how completely it is assembled and wired at the factory. To install this advanced furnace, it is necessary only to connect it to the gas and electrical supply and attach it to ducts. Bottom Air Intake is standard.

The optional Side Air Intake and Filter Frame which is shown, at left, installed on the Winter Air Conditioner, permits the return air intake to be located on either side of the cabinet. Rigidly constructed of galvanized steel, this low cost accessory has flanges for connection of the return air plenum and rails on which the filter conveniently slides out from the front.

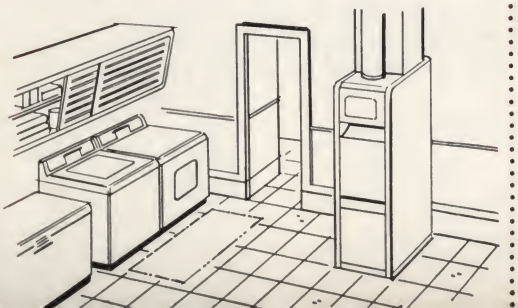
The accessory Return Air and Filter Cabinet which is shown assembled, above, can be installed at the rear or on either side of the Winter Air Conditioner. This cabinet is finished and constructed to match the furnace cabinet and has flanges for top attachment of the return air plenum. A door on the rear panel affords ready access to the filter, which is mounted inside. Slip-joint construction provides quick assembly, from the compact carton in which it is packed, to the furnace cabinet.

When the proper blower capacity is installed, the Winter Air Conditioner can be converted for summer air conditioning at any time. Ability to operate with high external static pressures assures that this furnace can be equipped to deliver the high air flows needed to overcome the resistance of a Cooling Coil, and at the velocity needed to deliver the cooling air. The Winter Air Conditioner is illustrated, above, with a Plenum-type Cooling Coil installed above the air discharge opening.

Basement installation with the optional Return Air and Filter Cabinet installed at the side. Approval for Close Clearances permits installation close to wall.



Utility room installatior of the Winter Air Conditioner. Its distinctive styling makes this unit equally as attractive as the other modern appliances.



Closet installation of the Winter Air Conditioner. Its clean good looks eliminate the need for front enclosure.

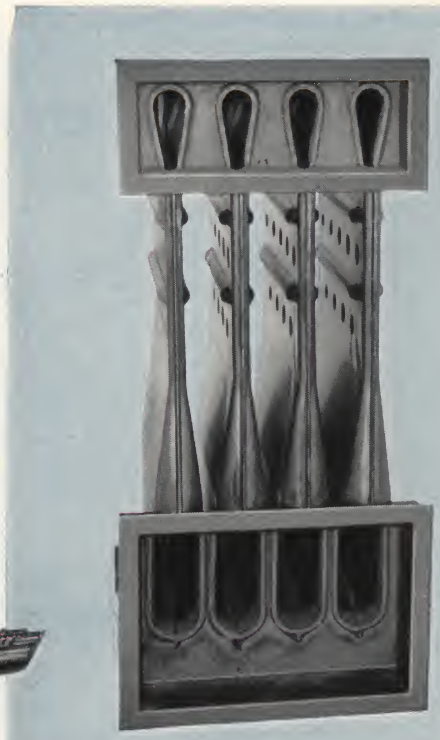
Southaire

Rugged Steel Heating Element

and Multiport Ribbon-Type Burners

provide UNEXCELLED

Operating Efficiency



WELDED SECTIONAL HEATING ELEMENT

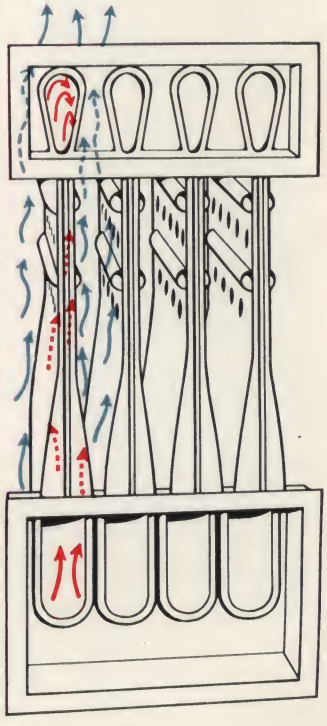
The advanced construction of this heating element combines precision die-forming with modern electrical welding. The individual sections are formed from heavy gauge steel, welded together to make gas-tight and leak-proof chambers, and welded again to the flue pouch and the burner pouch. The result is an integral, single unit which is so rugged that it can be fully guaranteed for ten years.

MULTIPORT RIBBON-TYPE BURNERS

The tapered steel burner tubes deliver a mixture of fuel gas and air at the same pressure to the complete length of the burner opening. Crimped burner ribbons break this air-fuel mixture into multiple, small jets that burn with a clear, thin flame.

These burner ribbons, which are the only point where flame can touch metal, are constructed of heat-and-corrosion resistant stainless steel. The burner tubes are centered accurately within the heating element chambers as positive prevention of any possible contact of flame with the walls.

The burner ribbons are readily removable for cleaning.



CONTOUR DESIGN PROVIDES MAXIMUM HEAT TRANSFER . . . ALLOWS UNRESTRICTED AIR FLOW

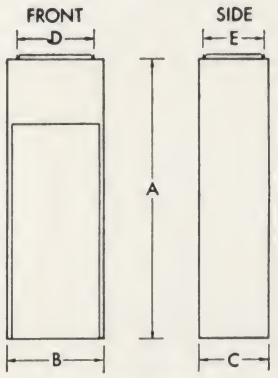
The unique contour of the heating element chambers provides restriction inside and prevents restriction outside.

Inside, the flow of hot combustion gases is restricted to cause these gases to transfer all possible heat before entering the flue.

Outside, the contoured surfaces cause turbulence in the air circulated over the large-area sides, for utmost heat transfer. However, there is plenty of space between the chambers to allow the additional air circulation needed when a cooling coil is installed with the furnace.

gas fired winter air conditioners

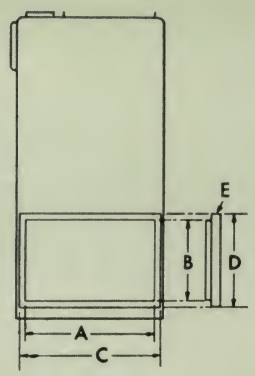
Dimensions



Return Air Cabinet

RETURN AIR and FILTER CABINET for UPFLOW UNITS — DIMENSIONS in INCHES

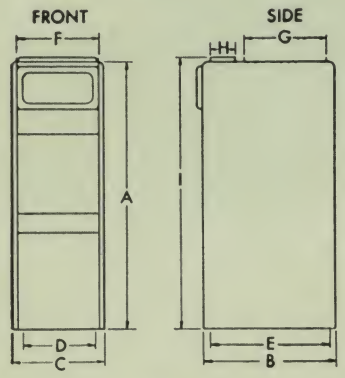
FOR UNIT NO:	SH-75-D	SH-100-D SH-100	SH-125	SH-150
A — Height	54	54	54	57
B — Width	16	18	22	26
C — Depth	16⅛	16⅛	16⅛	16⅛
D x E—Return Air Plenum	14 x 14	16 x 14	20 x 14	24 x 14
Plenum No.	#22	#23	#25	#27



Side Filter Frame

SIDE AIR INTAKE and FILTER FRAME for UPFLOW UNITS — DIMENSIONS in INCHES

UNIT NO.	SH-75-D	SH-100-D SH-100	SH-125	SH-150
A x B — Return Air Plenum	18 x 14	24 x 14	24 x 18	24 x 24
Plenum No.	#24	#27	#47	#77
C — Depth	20¼	25¼	25¼	25¼
D — Height	15¼	16¼	20¼	25¼
E — Width	1⅜	1⅜	4⅞	4⅞

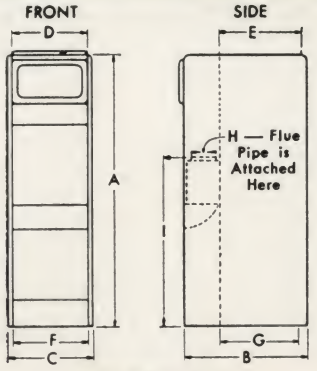


Upflow Units

UPFLOW UNITS — DIMENSIONS in INCHES

UNIT NO.	SH-75-D*	SH-100-D* SH-100	SH-125	SH-150
A — Height of Cabinet	54	54	54	57
B — Depth of Cabinet	26	26	26	29
C — Width of Cabinet	16	18	22	26
D x E — Return Air Plenum (Bottom)	12 x 18	14 x 22	18 x 22	22 x 22
Filter Size	15 x 20	16 x 25	20 x 25	25 x 25
Plenum No.	#14	#26	#46	#66
F x G — Warm Air Plenum (Top)	14 x 16	16 x 16	20 x 16	24 x 16
Plenum No.	#23	#33	#35	#37
H — Flue Collar Diameter	5	5	6	7
I — Height to Center of Flue Collar	54¾	54¾	54¾	57¾
Gas Pipe — Natural, Mixed or L.P. Manufactured	½ ½	½ ½	½ ¾	½ ¾

*Equipped with Direct Drive Blower



Counterflow Units

COUNTERFLOW UNITS — DIMENSIONS in INCHES

UNIT NO.	SHC-75-D*	SHC-100-D* SHC-100	SHC-125	SHC-150
A — Height of Cabinet Height with Accessory Combustible Floor Frame and Base	64 67	64 67	64 67	69 72
B — Depth of Cabinet	26	26	26	32
C — Width of Cabinet	16	18	22	26
D x E — Return Air Plenum (Top)	14 x 16	16 x 16	20 x 16	24 x 18
Filter Size	(3) 8 x 16	(3) 8 x 16	(1) 16 x 16 (2) 8 x 16	(3) 10 x 20
Plenum No.	#23	#33	#35	#47
F x G — Warm Air Plenum (Bottom — with or without Combustible Floor Frame and Base)	12 x 16	14 x 16	18 x 16	22 x 16
Plenum No.	#13	#23	#34	#36
H — Flue Collar Diameter	5	5	6	7
I — Height to Top of Flue Collar	36	36	36	36
Gas Pipe — Natural, Mixed or L.P. Manufactured	½ ½	½ ½	½ ¾	½ ¾

*Equipped with Direct Drive Blower

Southaire
gas fired winter air conditioners

RATINGS

Upflow Units				Counterflow Units			
UNIT NO.	A.G.A. Approved for Natural, Manufactured or Liquefied Petroleum Gas		Approximate Shipping	UNIT NO.	A.G.A. Approved for Natural, Manufactured or Liquefied Petroleum Gas		Approximate Shipping
	Btu Input	Btu at Bonnet	Wt. Lbs.		Btu Input	Btu at Bonnet	Wt. Lbs.
SH-75-D*	75,000	60,000	189	SHC-75-D*	75,000	60,000	200
SH-100-D*	100,000	80,000	222	SHC-100-D*	100,000	80,000	250
SH-100	100,000	80,000	222	SHC-100	100,000	80,000	250
SH-125	125,000	100,000	275	SHC-125	125,000	100,000	290
SH-150	150,000	120,000	310	SHC-150	150,000	120,000	344

*Equipped with Direct Drive Blower.

AIR TEMPERATURE RISE at A.G.A. TEST CONDITIONS

Upflow Units

UNIT NO.	SH-75-D	SH-75-S*	SH-100-D	SH-100	SH-100-S*	SH-100-SS**	SH-125	SH-125-S*	SH-125-SS*	SH-150	SH-150-S*	SH-150-SS*
Blower No.	8-7D	9-7	9-9D	9-9	9-9	10-8	9-9	10-10	10-10	10-10	10-10	12-12
Motor H. P.	1/10	1/4	1/6	1/6	1/4	1/3	1/4	1/3	1/2	1/3	1/2	3/4
Speed Control No. or Drive Combination	17001	3-1/4 x 6	17104	3-1/4 x 6	3-1/4 x 5	3-1/4 x 5	3-1/4 x 6	3-1/4 x 6	4 x 6	3-1/4 x 6	4 x 6	4 x 7
External Static Pressure —Inches of Water	0.12	0.50	0.15	0.15	0.50	0.50	0.20	0.50	0.50	0.20	0.50	0.75
Cubic Feet Per Minute	648	648	863	863	863	1220	1079	1079	1528	1294	1294	1833
Temperature Rise—°F	85°	85°	85°	85°	85°	60°	85°	85°	60°**	85°	85°	60°**

Counterflow Units

UNIT NO.	SHC-75-D	SHC-75-S*	SHC-100-D	SHC-100	SHC-100-S*	SHC-125	SHC-125-S*	SHC-125-SS*	SHC-150	SHC-150-S*	SHC-150-SS*
Blower No.	8-7D	9-7	9-9D	9-9	9-9	9-9	9-9	10-10	10-10	10-10	12-12
Motor H.P.	1/10	1/4	1/6	1/6	1/4	1/4	1/3	1/2	1/3	1/2	3/4
Speed Control No. or Drive Combination	17001	3-1/4 x 5	17002	3-1/4 x 6	3-1/4 x 5	3-1/4 x 6	3-1/4 x 5	4 x 6	3-1/4 x 7	4 x 6	4 x 7
External Static Pressure —Inches of Water	0.12	0.50	0.15	0.15	0.35	0.20	0.40	0.50	0.20	0.50	0.75
Cubic Feet Per Minute	648	648	863	863	863	1079	1079	1528	1294	1294	1833
Temperature Rise—°F	85°	85°	85°	85°	85°	85°	85°	60°**	85°	85°	60°**

*Units equipped with Optional (At Additional Cost) Blower Motor or Blower and Motor.
**Units approved for 60° Temperature Rise. Must be equipped with Special Filter Arrangement to provide double the standard filter area. (Available at Additional Cost.)

MAXIMUM AIR DELIVERIES with STANDARD and OPTIONAL ★ BLOWER and MOTOR COMBINATIONS

Upflow Units

UNIT NO.	Blower No.	Motor H. P.	Speed Control No. or Drive Combination	Standard or Optional	AIR TEMPERATURE RISE: °F WITH EXTERNAL STATIC PRESSURE IN INCHES OF WATER					CUBIC FEET PER MINUTE AT EXTERNAL STATIC PRESSURE IN INCHES OF WATER				
					.15	.20	.30	.40	.50	.15	.20	.30	.40	.50
SH-75-D	8-7D	1/10	17001	Std.	87	90	100	115	—	635	610	550	477	—
			Removed		78	81	89	103	—	707	682	618	535	—
	8-7	1/6	3-1/4 x 5	Opt.	80	85	100	—	—	690	650	550	—	—
	9-7	1/4	3-1/4 x 6	Opt.	57	59	64	72	87	970	935	860	765	630
		1/4	3-1/4 x 5	Opt.	—	—	—	53	57	—	—	—	1040	975
		1/3	3-1/4 x 5	Opt.	—	48	50	53	57	—	1150	1100	1040	945
SH-100-D	9-9D	1/6	17104	Std.	97	99	104	113	—	760	745	705	650	—
			Removed		77	79	85	94	105	955	925	860	780	695
SH-100	9-9	1/6	3-1/4 x 6	Std.	—	85	85	96	—	—	860	860	760	—
		1/4	3-1/4 x 6	Opt.	74	77	85	96	—	985	950	860	760	—
		1/4	3-1/4 x 5	Opt.	—	—	69	74	82	—	—	1055	985	890
		1/3	3-1/4 x 5	Opt.	64	65	69	74	82	1150	1120	1055	985	890
	10-8	1/4	3-1/4 x 6	Opt.	—	64	69	76	85	—	1150	1065	970	860
		1/3	3-1/4 x 6	Opt.	62	64	69	76	85	1180	1150	1065	970	860
		1/3	3-1/4 x 5	Opt.	—	—	—	60	63	—	—	—	1225	1160
		1/2	3-1/4 x 5	Opt.	—	53	57	—	—	—	1370	1295	—	—
SH-125	9-9	1/4	3-1/4 x 6	Std.	83	86	93	106	—	1100	1070	985	865	—
		1/3	3-1/4 x 5	Opt.	66	68	73	76	85	1380	1340	1250	1165	1080
	10-10	1/3	3-1/4 x 6	Opt.	—	63	69	76	85	—	1450	1330	1205	1080
		1/2	4 x 6	Opt.	—	—	—	51	55	—	—	—	1785	1680
		3/4	4 x 6	Opt.	—	46	49	51	55	—	1990	1885	1785	1680
SH-150	10-10	1/3	3-1/4 x 6	Std.	75	77	81	86	96	1460	1430	1363	1275	1145
		1/2	4 x 6	Opt.	60	61	63	66	69	1840	1805	1740	1665	1590
	12-12	3/4	4 x 7	Opt.	—	—	—	49	52	—	—	—	2265	2115

Counterflow Units

UNIT NO.	Blower No.	Motor H. P.	Speed Control No. or Drive Combination	Standard or Optional	AIR TEMPERATURE RISE: °F WITH EXTERNAL STATIC PRESSURE IN INCHES OF WATER					CUBIC FEET PER MINUTE AT EXTERNAL STATIC PRESSURE IN INCHES OF WATER				
					.15	.20	.30	.40	.50	.15	.20	.30	.40	.50
SHC-75-D	8-7D	1/10	17001	Std.	87	90	98	—	—	633	612	562	—	—
			Removed		76	81	91	104	—	720	680	605	527	—
	8-7	1/6	3-1/4 x 5	Opt.	73	76	85	103	—	755	720	645	523	—
	9-7	1/6	3-1/4 x 6	Opt.	58	61	68	80	—	950	905	805	685	—
		1/4	3-1/4 x 5	Opt.	48	49	53	58	65	1155	1117	1040	953	850
SHC-100-D	9-9D	1/6	17002	Std.	93	95	102	115	—	790	770	715	640	—
			Removed		89	92	99	110	128	825	800	740	670	575
SHC-100	9-9	1/6	3-1/4 x 6	Std.	87	92	105	—	—	840	795	700	—	—
		1/4	3-1/4 x 5	Opt.	68	70	75	82	92	1085	1050	975	895	800
SHC-125	9-9	1/4	3-1/4 x 6	Std.	75	78	87	101	—	1225	1170	1050	910	—
		1/3	3-1/4 x 5	Opt.	60	62	65	71	78	1527	1485	1400	1300	1180
	10-10	1/2	4 x 6	Opt.	45	46	49	51	54	2015	1973	1888	1800	1712
SHC-150	10-10	1/3	3-1/4 x 7	Std.	—	60	64	69	77	—	1845	1720	1605	1430
		1/2	4 x 6	Opt.	—	—	—	48	51	—	—	—	2270	2160
	12-12	3/4	4 x 7	Opt.	—	—	—	—	36	—	—	—	—	3060

*Optional at additional cost. Blower, Motor or Blower and Motor to produce additional Air Delivery as indicated. Printed in U.S.A. 8585

Southaire

GAS FIRED BASEMENT TYPE

WINTER AIR CONDITIONING UNITS

Illustration above shows Winter Air Conditioning Unit converted for Year 'Round Air Conditioning. "A"-type Cooling Coil of Air Cooled Summer Air Conditioner is installed in Plenum above Winter Unit. Air Cooled Condensing (Refrigerant) Unit is installed remotely.

AMERICAN GAS ASSOCIATION APPROVED · COMPLIES WITH NATIONAL SAFETY REQUIREMENTS

Basement Type Winter Air Conditioning Unit with built-in Vestibule and Hinged Door

Southaire GAS FIRED BASEMENT

Interior view of Unit with Built-in Vestibule and Hinged Door, Nos. A-105, A-105-D, A-125, A-150, A-210, A-260.

Outstanding Design and Construction Features

1. Attractive cabinet, heavy and rigid, with gracefully rounded corners, finished in smooth, baked enamel. Available with hinged, vestibule door or the cabinet with the burner controls and gas manifold exposed. Metal floor of cabinet which eliminates the need for grouting or special platforms, prevents infiltration of basement dust.

2. The cylindrical construction of the heavy gauge steel heating element eliminates expansion and contraction noises. The design of the radiator retards the passage of the hot gases from the fire until a maximum of heat has been extracted from the products of combustion, and utilized. Radiators can be inspected and cleaned, if necessary, through the easy-to-get-at clean-out ports.

3. Radiation Shields or Panels. Absorbs heat radiated by the combustion chamber. Increases heating surface and heating capacity. Keeps cabinet relatively cool.

4. The Single Port Gas Burners burn all gases, manufactured, natural and liquefied petroleum with equal efficiency. A burner support assures correct position of the burner in the combustion chamber at all times.

5. Removable Heating Element. Complete heating element can be taken out of cabinet by removing front cabinet panel and disconnecting the gas burner and gas supply manifold without disturbing the rest of the cabinet, plenum chamber or ducts.

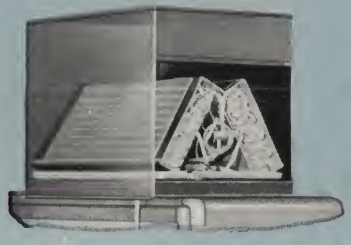
6. Blower, Motor, Filters. Blower and motor are rubber mounted for quiet operation. Blower, motor and filters are readily accessible through the access door in rear of the cabinet.

Attractive eye appeal and extra sales appeal have been built into this outstanding line of gas-fired heating and air conditioning units — units which are designed and constructed to meet a high standard of performance in heating efficiency, fuel economy and silent operation.

The heavier, more rigid cabinets are as pleasing in appearance as a beautiful piece of furniture — they will enhance any type of heating installation. Corners are gracefully rounded, forming attractive curved lines that make these handsome units distinctive and far more outstanding than ordinary heating plants.

The heating elements used in this complete line of heating and air conditioning units are ruggedly constructed of heavy gauge steel, welded leak-proof and gas-tight to assure long years of trouble-free heating satisfaction.

Front View of unit with Burner and Burner Controls exposed, Nos. A-70-ED, A-85-ED, A-105-ED, A-105-E and A-125-E.



Plenum For Cooling Coil

Optional Accessory, Galvanized Plenum provides for later installation of A-Type Cooling Coil. Plenum has top and is high enough so that ducts can be taken off both sides. Cooling Coil easily slides into Plenum on built-in rails.

Available at low cost in three sizes, for 2, 3 and 5 Ton capacity Cooling Coils. Shipped knocked-down, carton-packed.

BUILT FOR YEARS OF HEATING SATISFACTION WITH

TYPE WINTER AIR CONDITIONING UNITS

Heating Element for Gas Fired Basement Units.

Superbly Designed and Constructed Steel Heating Elements

The heating element is constructed of heavy gauge steel. Automatic submerged arc welding is used to bond and seal joints making the heating element a one-piece, gas-tight and leak-proof unit.

The flame does not impinge at any point of the surface of the combustion chamber. Instead, heat from the flame is transmitted by radiation over the entire area. There are no hot-spots that will burn out prematurely and no "cold-spots" to cause condensation.

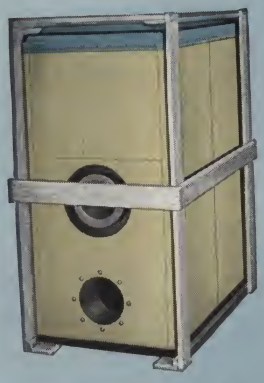
Radiators are so designed and constructed that the hot gases of combustion must pass over all the heat transmitting surfaces before they enter the flue. Radiators are equipped with clean-out ports that are readily accessible, by removing a cabinet panel.

BURNS GAS OR OIL WITH EQUALLY HIGH EFFICIENCY

All Gas Fired Units, except No. A-70-ED and No. A-85-ED, are designed and constructed for quick, easy change-over to oil burning by simply removing the gas burner, manifold and controls and replacing them with the gun type Oil Burner.

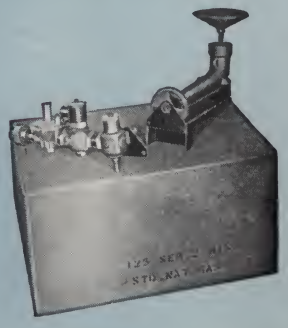
Gas fired units converted for oil burning with the approved gun type Oil Burner operate with equally high efficiency, as when burning gas.

Oil Burner, complete with all controls, pre-cast fire-box, necessary parts and fittings for a complete oil-fired installation.



Assembled Unit, crated before cardboard protective wrapping is inserted inside of crate.

Gas Burner, complete with all controls, necessary parts and fittings for a complete gas-fired installation.



Removing Complete Heating Element

An outstanding feature is the ease with which the complete heating element can be installed or removed from the cabinet without disturbing cabinet side panels, top, plenum chambers or ducts. In fact, the heating element can be removed for inspection or cleaning in a matter of minutes.

Gas Burner

The new, simplified single port gas burner produces a clean flame and affords economical, trouble-free operation. The gas pressure regulator is equipped with an ingenious "STEP-FLO" Leak Limiting Device which includes a slow opening feature to provide smooth, gradual, noiseless ignition. This device is A. G. A. approved and permits installation of the regulator without a bleed line.

Single Port Gas Burners

The burner support insures perfect positioning of the burner and pilot in relation to the gas supply manifold and the combustion chamber.

A distinctive feature is the ease with which the burner can be removed from the combustion chamber without dismantling gas manifold.

Not furnished for Nos. A-210 and A-260.

SUPERIOR HEATING ELEMENTS • BURNERS • CONSTRUCTION FEATURES

Southaire Gas Fired BASEMENT AIR CONDITIONING UNITS

RATINGS . . . DIMENSIONS AND SPECIFICATIONS

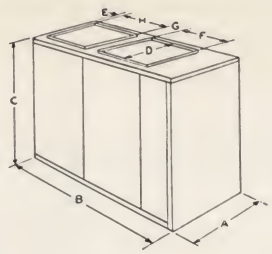
RATINGS

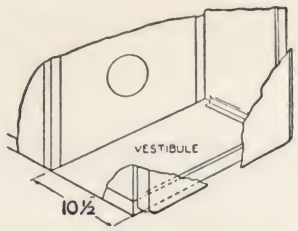
UNIT NO.	A.G.A. Approved for Natural, Manufactured, Mixed or Liquefied Petroleum Gas					Approx. Shipping Weight Lbs.
	Btu Input	Btu at Bonnet	Btu at Register	Filter No.	Filter Size	
A-70-ED	70,000	56,000	47,600	1	16″ x 20″	252
A-85-ED	85,000	68,000	57,800	1	16″ x 20″	278
A-105-ED	105,000	84,000	71,400	1	16″ x 25″	324
A-105-E	105,000	84,000	71,400	1	16″ x 25″	324
A-105-D	105,000	84,000	71,400	1	16″ x 25″	361
A-105	105,000	84,000	71,400	1	16″ x 25″	361
A-125-E	125,000	100,000	85,000	1	20″ x 25″	367
A-125	125,000	100,000	85,000	1	20″ x 25″	376
A-150	150,000	120,000	102,000	2	16″ x 20″	473
A-210	210,000	168,000	143,000	4	16″ x 20″	691
A-260	260,000	208,000	177,000	4	16″ x 20″	788

Unit Nos. A-70-ED, A-85-ED, A-105-ED, and A-105-D are equipped with Direct Drive Blowers.

RATINGS WHEN EQUIPPED FOR OIL

UNIT NO. Oil	UNIT NO. Gas	Oil Btu Input
O-71-E	A-105-E	105,000 (.75 gal.)
O-71-D	A-105-D	105,000 (.75 gal.)
O-71	A-105	105,000 (.75 gal.)
O-86-E	A-125-E	126,000 (.90 gal.)
O-86	A-125	126,000 (.90 gal.)
O-114	A-150	168,000 (1.2 gal.)
O-158	A-210	231,000 (1.65 gal.)
O-192	A-260	280,000 (2.00 gal.)





Above dimension does not apply to "E" Units, which do not have built-in vestibule.

DIMENSIONS

UNIT NO. Gas	UNIT NO. Oil	A Cabinet Width	B Cabinet Depth	C Cabinet Height	Depth Draft Hood	D x F Warm Air Plenum	D x H Return Air Plenum	E	G	Vent Dia.	Ht. Center Flue Openina	GAS PIPING Nat.	GAS PIPING Mfg.	GAS PIPING Liq. Pet.
A-70-ED		18″	34″*	48½″	6″	14″ x 16″	14″ x 12″	2″	2″	5″	49½″	½″	½″	½″
A-85-ED		18″	36″*	48″	6″	14″ x 16″	14″ x 12″	2½″	3″	5″	49½″	½″	½″	½″
A-105-ED,	O-71-ED	20″	36″*	52½″	6″**	18″ x 16″	18″ x 14″	2″	2″	5″**	54″	½″	½″	½″
A-105-E,	O-71-E	20″	36″*	52½″	6″**	18″ x 16″	18″ x 14″	2″	2″	5″**	54″	½″	½″	½″
A-105-D,	O-71-D	20″	49½″	52½″	6″**	18″ x 16″	18″ x 14″	2″	2″	5″**	54″	½″	½″	½″
A-105,	O-71	20″	49½″	52½″	6″**	18″ x 16″	18″ x 14″	2″	2″	5″**	54″	½″	½″	½″
A-125-E,	O-86-E	25″	42″*	52½″	7″	22″ x 20″	22″ x 16″	1″	3″	6″	54½″	½″	½″	½″
A-125,	O-86	25″	55½″	52½″	7″	22″ x 20″	22″ x 16″	1″	3″	6″	54½″	½″	½″	½″
A-150,	O-114	26″	60″	57″	8″	22″ x 22″	22″ x 18″	1″	4″	6″	55½″	¾″	1″	½″
A-210,	O-158	36″	76½″	54″	10″	32″ x 32″	32″ x 24″	2″	4″	8″	58⅛″	1″	1″	¾″
A-260,	O-192	36″	76½″	54″	10″	32″ x 32″	32″ x 24″	2″	4″	8″	58⅛″	1″	1¼″	¾″

*Add 6″ for gas controls for Nos. A-70-ED, A-85-ED, A-105-ED, A-105-E. Add 8″ for gas controls for A-125-E. **For L.P. Gas, Depth is 7″, Dia. is 6″.

MAXIMUM AIR DELIVERIES WITH STANDARD AND OPTIONAL * BLOWER MOTORS

UNIT NO. Gas	UNIT NO. Oil	Blower No.	Blower Motor H.P.	Speed Control or Drive Combination	Belt Length	Blower R.P.M.	Air Temperature Rise: °F—With External Static Pressure in Inches of Water 0.15	0.20	0.30	0.40	0.50	Cubic Feet Per Minute at External Static Pressure in Inches of Water 0.15	0.20	0.30	0.40	0.50
A-70-ED		D-8	⅛	2130	—	1060	88	93	107	—	—	583	553	479	—	—
				None	—	1080	87	92	103	128	—	590	558	495	405	—
A-85-ED		DD9-6	⅛	2130	—	940	93	97	102	109	122	671	642	611	572	511
				None	—	1000	89	91	99	104	119	702	685	629	599	523
A-105-ED,	O-71-ED	DD9-9	⅙	2131	—	975	91	95	102	111	125	847	813	755	694	616
A-105-D,	O-71-D			None	—	1020	83	85	94	101	114	930	907	820	763	676
A-105-E,	O-71-E	A-9	⅙	3¼x6	34″	900	85	87	94	109	—	906	885	818	706	—
A-105,	O-71		*¼	3¼x5	33″	1070	66	69	73	79	83	1162	1112	1052	973	927
A-125-E,	O-86-E	A-10	¼	3¼x7	38″	800	—	77	85	100	125	—	1190	1080	917	734
A-125,	O-86		*⅓	3¼x6	36″	900	—	65	72	80	88	—	1410	1274	1145	1040
A-150,	O-114	A-10	¼	3¼x7	38″	810	—	102	111	124	—	—	1210	1110	1000	—
			*⅓	3¼x6	36″	915	—	89	96	103	113	—	1390	1280	1200	1090
A-210,	O-158	A-12	⅓	3¼x8	42″	655	—	71	79	86	103	—	2376	2155	1977	1640
			*½	4x9	46″	740	—	59	64	68	75	—	2860	2660	2497	2270
A-260,	O-192	A-15	½	4x12	55″	585	—	66	74	83	99	—	3110	2790	2488	2070
			*¾	4x11	53″	614	—	—	63	69	79	—	—	3255	2985	2622

*Optional Blower, Motor and Drive Combination for Additional Air Deliveries as Indicated.

Printed in U.S.A. 11574

Southaire

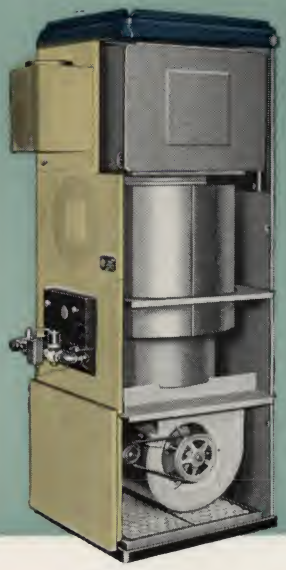
GAS FIRED

utility units

counterflow units

COMPLIES WITH NATIONAL SAFETY REQUIREMENTS · AMERICAN GAS ASSOCIATION · APPROVED ·

Southaire Counterflow and Utility Air Conditioning



Interior view of Utility Unit

Advanced engineering and construction, clean design and smart styling give Southaire Utility and Counterflow Air Conditioning Units their superior performance and modern good looks.

Wherever installation space is at a premium, these compact Southaire units completely fill the need for automatic, gas-fired winter air conditioning.

The Counterflow unit differs from the Utility Unit, only in the location of the blower-filter chamber. In the Counterflow unit, the blower is located in the top of the cabinet, directing the flow of warm air downward to ducts located either in or under the floor. The return air enters this unit at the top of the cabinet. In the Utility Unit, the blower is located in the bottom of the cabinet, directing the flow of air upward. The return air can enter this unit through the bottom, either side, or rear of the cabinet. Side filter frames can be supplied when specified.

THE UTILITY UNIT

This attractive and efficient space-saving unit carries the approval seal of the American Gas Association. In addition, both the Utility and Counterflow Unit provide many construction, performance and convenience features, special with Southaire . . .

Rigid Cabinets. Distinctively styled with rounded corners and durable, two-tone baked enamel finish.

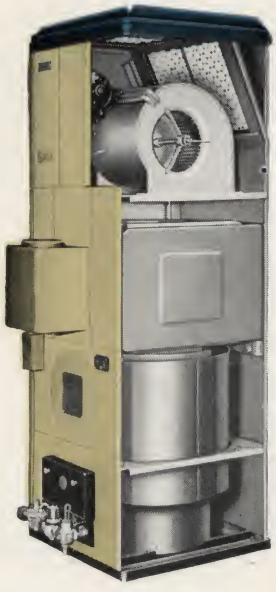
Heavy Gauge Steel Heating Element. Continuously welded cylindrical design is gas tight and leakproof, and eliminates expansion and contraction noises. Provision is made for quick inspection and easy cleaning, through readily accessible clean-out ports.

Radiation Shields. Special steel radiation panels surround the upper portion of the heating element and absorb and utilize heat radiated by the chamber. Keep cabinet relatively cool.

Heating Element Completely Removable. Entire heating element can be removed easily — without dismantling the cabinet or disturbing plenum chamber or ducts — simply by removing front cabinet panel, and disconnecting the gas burner and manifold.

Single Port Gas Burner. Burns all types of gas and gas mixtures. Correct position in combustion chamber assured by burner support.

Rubber Mounted Blower and Motor. Assures quiet operation. Blower, motor and filters are easy to reach through access door.



Interior view of Counterflow Unit

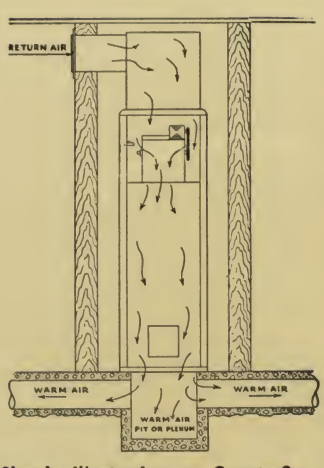
THE COUNTERFLOW UNIT

Combined with a perimeter type warm air distribution system, the Counterflow Unit accomplishes superior winter air conditioning in the basementless home and in other buildings without basements — providing warm floors and even heat distribution.

Southaire Counterflow Units are adaptable for either the concrete slab or "crawl space" type of installation. Where the heating ducts are imbedded in a concrete slab, warm air is discharged from the bottom of the unit into a pit formed in the slab. Where the ducts are located under the floor, in a "crawl space" between the ground and the floor, the warm air is discharged into a sheet metal plenum or chamber.

When required for installation on combustible floors, a special A. G. A. approved base is available as an accessory.

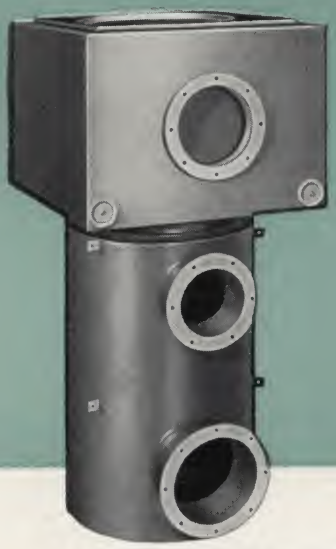
In all Counterflow Units a special safety cut-out switch will shut off the burner and prevent overheating in case of blower failure.



Sketch illustrating a Counterflow installation on a concrete floor slab.

Available For Close Clearance Installations in Closets — Alcoves — Utility Rooms

Units . . . Compact • Efficient • Versatile



Superbly Designed and Ruggedly Constructed All Steel Heating Element . . . Easily Removed Without Dismantling Cabinet

Single Port Gas Burner

THE HEATING ELEMENT

The steel heating element — combustion chamber and radiator — is made a one-piece leak-proof unit by advanced welding methods. These modern techniques also provide for long years of carefree service.

The flame does not impinge at any point on the surface of the combustion chamber. Instead, heat from the flame is transmitted by radiation uniformly over the entire area. There are no hot spots that will burn out prematurely. Long life is thus assured.

The radiator is constructed so that the hot gases of combustion must wipe all the heat transmitting surfaces of the radiator, before they enter the flue. All surfaces are readily accessible for cleaning. The radiation shield or radiation panels provide additional heat transfer surface, which explains the high heating capacity and also contributes to the remarkably low fuel consumption.

The complete heating element can be installed or removed for servicing without disturbing cabinet side panels, top, plenum chambers or ducts.

The new, simplified single port gas burner provides exceptionally quick ignition and is proof against "Flash-back". It produces a clean flame and affords trouble-free pilot operation. It efficiently burns all types of gas and gas mixtures.

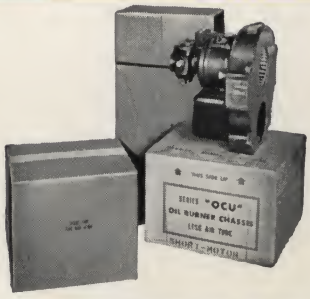
The burner support insures perfect positioning of the burner and pilot in relation to the gas supply manifold and the combustion chamber.

A distinctive feature is the ease with which the burner can be removed from the combustion chamber without dismantling gas manifold.

CONVENIENT CONVERSION TO OIL BURNING

All Counterflow Units are easily and quickly converted for oil firing by simply removing the Gas Burner and controls and installing the precast firebox in the combustion chamber and the Underwriters' listed Oil Burner.

When converted for oil burning, Southaire Utility and Counterflow Units operate as efficiently as when equipped for gas firing.



Oil Burner, complete with all controls, pre-cast fire-box, necessary parts and fittings for a complete oil burning installation.

3 POPULAR SIZES

Southaire Counterflow and Utility Air-Conditioning Units are built in the most popular sizes—100,000, 115,000 and 140,000 BTU input —to meet practically any need and application for winter air conditioning in the home or building without a basement, as well as in other types of buildings where space is restricted.

Both Units are shipped assembled, are easy to handle and require a minimum of installation.

Factory Assembled for Quick . . . Easy Installation

Southaire Counterflow . . . Utility Air Conditioning Units

RATINGS

AGA Approved for Natural, Manufactured or Liquefied Petroleum Gas

Unit No.	Btu Input	Btu at Bonnet	FILTERS No.	FILTERS Size	Approx. Ship. Wt.
H-100-ED	100,000	80,000	1	20″ x 20″	325
HC-100-ED	100,000	80,000	2	10″ x 20″	325
H-100-E	100,000	80,000	1	20″ x 20″	325
HC-100-E	100,000	80,000	1	20″ x 20″	325
H-115-E	115,000	92,000	1	20″ x 25″	385
HC-115-E	115,000	92,000	2	(1) 10″ x 20″, (1) 16″ x 20″	377
H-140-E	140,000	112,000	1	20″ x 25″	438
HC-140-E	140,000	112,000	2	16″ x 20″	448

"H" Designates Utility Units. "HC" Designates Counterflow Units.
Unit Nos. H-100-ED and HC-100-ED are equipped with Direct Drive Blowers.

DIMENSIONS

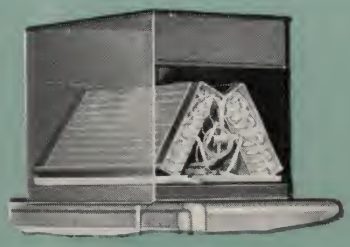
Unit No.	Cabinet Width	Cabinet Depth	Cabinet Height	Depth Draft Hood	PLENUMS Warm Air Plenum	No.	Warm Air with Base for Combustible Floor	No.	Return Air Plenum	No.	Return Air with Side Air Intake	No.	Vent Dia.	Ht. to Ctr. of Flue Opening	GAS PIPING Nat.	Mfg.	Liq. Pet.
H-100-ED	20″	20″	72″†	6″	18″ x 18″	#44	—		18″ x 18″	#44	17″ x 17″	—	5″	71¾″	¾″	¾″	½″
HC-100-ED	20″	20″	78″	6″	17″ x 17″	—	17″ x 17″	—	18″ x 18″	#44	—		5″	52¼″	¾″	¾″	½″
H-100-E	20″	20″	72″	6″	18″ x 18″	#44	—		18″ x 18″	#44	17″ x 17″	—	5″	71¾″	¾″	¾″	½″
HC-100-E	20″	20″	78″	6″	17″ x 17″	—	17″ x 17″	—	18″ x 18″	#44	—		5″	52¼″	¾″	¾″	½″
H-115-E	25″	25″	71½″	7″	22″ x 22″	#66	—		20″ x 22″	#56	18″ x 24″	#47	6″	72¾″	¾″	¾″	½″
HC-115-E	25″	25″	73¼″	7″	22″ x 22″	#66	22″ x 22″	#66	22″ x 22″	#66	—		6″	52¾″	¾″	¾″	½″
H-140-E	26″	26″	74″	7″	22″ x 22″	#66	—		20″ x 22″	#56	18″ x 24″	#47	6″	72½″	¾″	¾″	½″
HC-140-E	26″	26″	78″	7″	22″ x 22″	#66	23″ x 23″	—	24″ x 24″	#67	—		6″	51½″	¾″	¾″	½″

†Deduct 2″ in height when Side Air Intake is used.

MAXIMUM AIR DELIVERIES WITH STANDARD AND★ OPTIONAL BLOWER MOTORS

UNIT NO.	Blower No.	Motor H.P.	Standard or Optional	Speed Control or Drive Combination	Belt Length	Blower R.P.M.	AIR TEMPERATURE RISE: °F. with EXTERNAL STATIC PRESSURE in INCHES of WATER .15	.20	.30	.40	.50	CUBIC FEET per MINUTE at EXTERNAL STATIC PRESSURE in INCHES of WATER .15	.20	.30	.40	.50
H-100-ED	DD9-9	1/6	Std.	2130	—	980	96	100	110	126	—	763	733	666	582	—
				Removed	—	1020	90	94	102	115	—	816	780	717	637	—
H-100-E	A-9	1/6	Std.	3¼ x 6	35″	920	82	89	102	128	—	894	824	718	572	—
		1/4	Opt.	3¼ x 5	33″	1060	70	73	79	89	99	1048	1020	927	823	740
H-115-E	A-10	1/4	Std.	3¼ x 7	38″	800	—	61	67	76	98	—	1380	1260	1110	860
		1/3	Opt.	3¼ x 6	36″	900	—	—	58	61	68	—	—	1455	1380	1240
H-140-E	A-10	1/4	Std.	3¼ x 7	38″	810	—	84	93	103	130	—	1220	1105	998	790
		1/3	Opt.	3¼ x 6	36″	915	—	72	77	84	90	—	1430	1355	1220	1140
HC-100-ED	DD9-9	1/6	Std.	2131	—	990	93	95	102	111	—	788	771	718	660	—
				Removed	—	1040	85	89	97	106	119	862	824	755	690	616
HC-100-E	A-9	1/6	Std.	3¼ x 6	36″	920	80	86	94	119	—	917	853	780	616	—
		1/4	Opt.	3¼ x 5	33″	1060	64	68	70	78	88	1130	1079	1049	940	834
HC-115-E	A-10	1/4	Std.	3¼ x 7	39″	800	—	58	65	86	106	—	1450	1300	980	795
		1/3	Opt.	3¼ x 6	37″	910	—	—	—	58	69	—	—	—	1450	1220
HC-140-E	A-10	1/4	Std.	3¼ x 7	39″	810	—	74	81	94	124	—	1390	1270	1090	828
		1/3	Opt.	3¼ x 6	37″	915	—	63	68	73	80	—	1630	1510	1410	1280

★ Optional at additional cost—Blower Motor to produce additional Air Deliveries, as indicated.



Plenum For Cooling Coil

Optional Accessory, Galvanized Plenum provides for later installation of A-Type Cooling Coil. Plenum has top and is high enough so that ducts can be taken off both sides. Cooling Coil easily slides into Plenum on built-in rails.

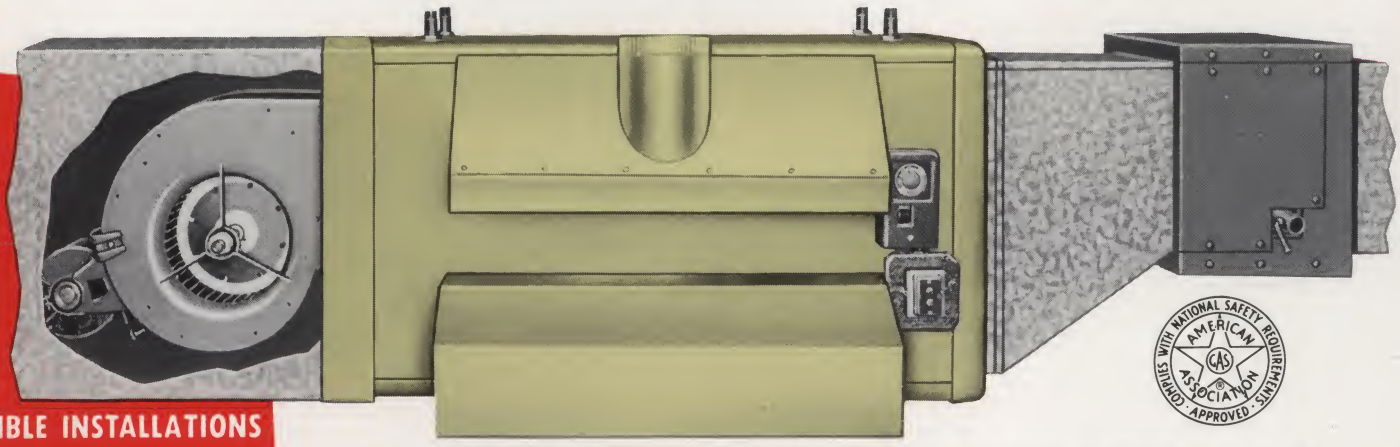
Available at low cost in three sizes, for 2, 3 and 5 H. P. capacity Cooling Coils. Shipped knocked-down, carton-packed.

Printed in U. S A. 1584

Southaire

GAS FIRED DUCT FURNACES

Below, the Gas Duct Furnace is shown equipped for year 'round air conditioning. The accessory Blower, which is illustrated attached to the furnace, could also be installed in a remote location. The Duct-type Cooling Coil, also an accessory, is part of an Air Cooled Summer Air Conditioning Unit and would be connected to a separate, remotely installed Compressor-Condenser Unit.



AMERICAN GAS ASSOCIATION · APPROVED · COMPLIES WITH NATIONAL SAFETY REQUIREMENTS

FLEXIBLE INSTALLATIONS for

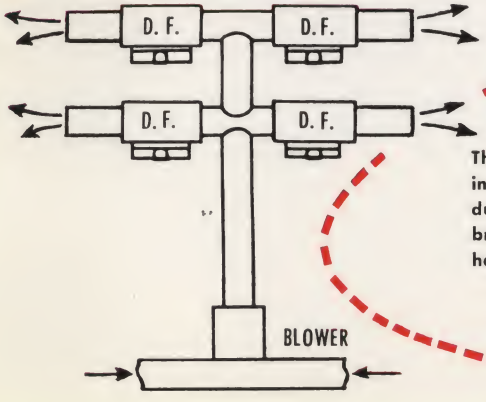
- **COMMERCIAL AND INDUSTRIAL HEATING**
- **YEAR 'ROUND AIR CONDITIONING**
- **VENTILATING SYSTEMS**

The Gas Fired Duct Furnace is designed for horizontal suspension in a duct system in which the circulating air is supplied for one or more furnaces by a separate blower.

Use of the Duct Furnace in the heating system of large industrial or commercial buildings provides the advantage of locating a heat source of the proper capacity in or near the area to be heated. Several Duct Furnaces, with air supplied from a common blower, can be installed either in series or in parallel.

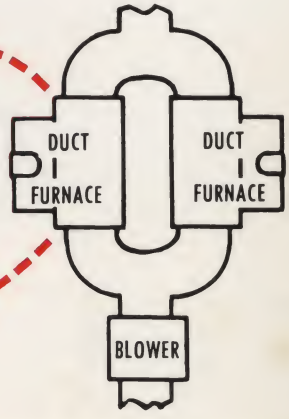
The Duct Furnace is also well suited for year 'round air conditioning installations, where the amount of heating is not in balance with the amount of cooling needed. The Duct Furnace can be operated with air velocities greater than those possible from a conventional forced air furnace, so that it is practical to combine a large-capacity Cooling Coil with a relatively smaller capacity Duct Furnace.

Where ventilating air for schools and other public buildings is induced through a duct system separate from the heating system, the Duct Furnace provides a low cost method of preheating the ventilating air before it is permitted to enter heated rooms.



The diagram, at left, illustrates how it is possible to install several Duct Furnaces in series for a branching duct system. Each furnace boosts the heat in its own branch duct, locating the heat source in or near the heated area.

The diagram, at right, illustrates how more than one Duct Furnace can be installed in parallel to provide high-capacity heating for a short duct run.



E. E. SOUTHER IRON CO.

1952 Kienlen Ave. **St. Louis 20, Missouri**

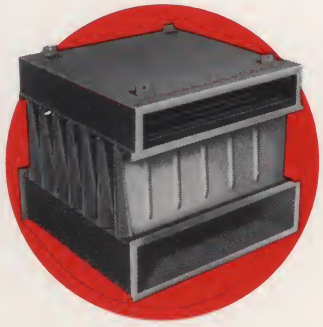
Rugged DESIGN AND CONSTRUCTION

With heat exchanger of heavy-gauge steel and a rigid, furnace-type casing so mounted that it supports no weight-bearing load, the Gas Fired Duct Furnace excells with sturdy design and construction.

A substantial steel frame, which is welded to the heat exchanger, supports the casing and has ¾" pipe bushings attached, for easy, reliable suspension of the furnace. The covered gas manifold and hooded draft diverter are also completely supported by the heat exchanger.

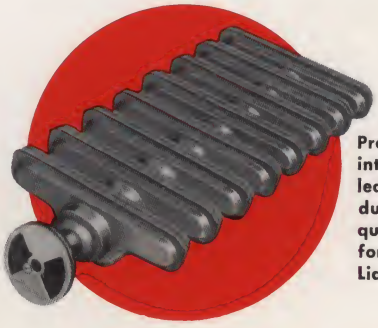
The gas manifold and the draft diverter can both be installed on either side of the furnace, and the gas manifold can be installed on one side with the draft diverter on the other side, with the exception of No. D-140. Thus, the gas line can be connected at the side nearest the gas supply and the flue pipe taken off the side nearest the chimney.

Combined with superior performance features, this excellent construction and extra flexibility assure long life and trouble-free service with the Gas Fired Duct Furnace.



SECTIONAL STEEL HEAT EXCHANGER

Heavy gauge steel sections are welded into a series of gas-tight and leak-proof chambers to form this efficient heat exchanger. The many heating surfaces, thus provided, extract the maximum amount of heat from hot combustion gases.



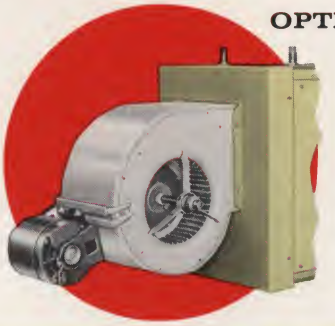
SLOTTED PORT STEEL BURNERS

Precision die-formed construction, with inter-locking edges which are welded leak-tight, makes this burner unusually durable. The slotted gas ports burn quietly and are approved by A. G. A. for Natural, Manufactured, Mixed or Liquified Petroleum Gas.

Versatile INSTALLATION PROVISIONS

FLUE COLLAR IS ADJUSTABLE

The flue vent collar is mounted on the draft hood so that it can be readily adjusted from a horizontal to vertical position, or visa versa. To make this change requires only removal of the mounting plate, turning it 180° and replacing it.



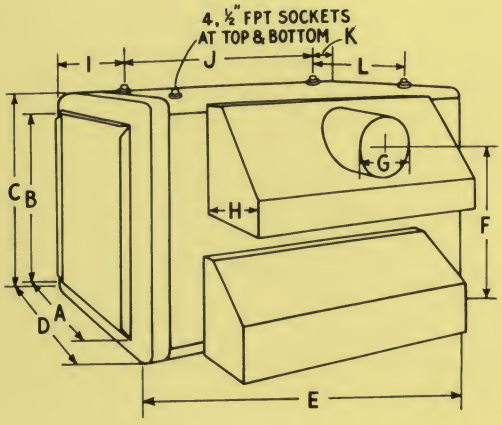
OPTIONAL BLOWER, MOTOR AND MOUNTING KIT

Comprised of the Centrifugal Blower, Blower Motor, Belt and Pulley Drive Combination, and Mounting Frame which fits over the end of the Duct Furnace, this accessory air supply kit can be supplied with the furnace when it is desirable to install the blower on the furnace.

DIMENSIONS

RATINGS

SPECIFICATIONS



DIMENSIONS IN INCHES

Unit No.	A x B Plenum Size (Warm Air or Return Air)	C Height	D Depth	E Length	F Ht. to Ctr. of Flue Opening	G Flue Collar Dia.	H Depth of Draft Hood	I	J	K	L	Gas Piping	
												Nat. & Mfd.	L.P.
D-80	16x18	21	18	39	17	5	8	5½	28	5½	11	¾	½
D-100	18x18	21	21	39	17½	5	8½	5½	28	5½	14	¾	½
D-120	22x20	24	24	39	20½	6	10	5½	28	5½	17	¾	½
D-140	24x20	24	27	39	20½	6	10½	5½	28	5½	20	¾	½

RATINGS

Unit No.	Btu Input	Btu Output	C.F.M. Min.	C.F.M. Max.	Approx. Shipping Wt. — Lbs.
D-80	80,000	64,000	590	1000	246
D-100	100,000	80,000	730	1300	262
D-120	120,000	96,000	880	1600	322
D-140	140,000	112,000	1020	2000	348

RESISTANCE TO AIR FLOW

Cubic Feet Per Minute	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
Unit No.	Resistance — Inches of Water Pressure Drop Through Unit for Corresponding Air Flow														
D-80, D-100	.01	.025	.042	.058	.075	.092	.108	.125							
D-120, D-140				.043	.056	.069	.082	.095	.107	.120	.133	.146	.159	.172	.185

MAXIMUM AIR DELIVERIES WITH ACCESSORY BLOWERS AND MOTORS

Unit No.	Blower No.	Blower Mounting Frame No.	Motor H.P.	Pulley Drive Combination	Belt Length	CUBIC FEET per MINUTE at EXTERNAL STATIC PRESSURE in INCHES of WATER .20	.30	.40	.50
D-80	A9-3	3-26-57A	1/6	3¼x6	37"	920	—	—	590
			1/4	3¼x5	38"	—	1000	—	900
D-100	A-9	3-26-57B (Rev. 1)	1/6	3¼x6	37"	1150	—	895	—
			1/3	3¼x5	36"	—	1300	—	1060
D-120	A-9	3-26-57C	1/6	3¼x6	37"	1200	—	920	—
			1/3	3¼x5	36"	1570	—	—	1250
D-140	A-10	3-26-57D	1/4	3¼x6	38"	1350	—	1020	—
			3/4	4x6	40"	1840	—	—	1500

Printed in U.S.A. 3-584

COMPLETELY ASSEMBLED AND WIRED AT THE FACTORY

Southaire Gas Fired GRAVITY FURNACES

No. G-86 Gravity Furnace.

View of No. G-110, No. G-135 Furnaces

Interior view of furnace showing rugged, compact construction, No. G-110, No. G-135.

This Gravity Furnace incorporates many of the advanced design and construction features found in winter air conditioning units.

Heating element is of heavy gauge steel construction. Automatic, submerged arc welding is used to bond and seal joints, making the heating element, in effect, a one-piece, gas-tight and leak-proof unit.

Cabinets are constructed of heavy gauge steel, and are attractively finished in baked hammerloid enamel. The No. G-86 furnace casing has square corners; the base does not have a metal floor.

The No. G-110 and No. G-135 furnace casings have rounded corners. A complete metal floor in their rigid, one-piece bases, eliminates the need for grouting or special platforms. Base supporting channels make these furnaces easy to level.

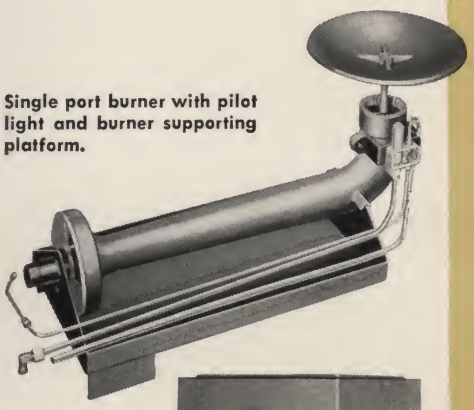
The No. G-86 and No. G-110 furnaces, because their compact size makes them easy to handle, are assembled at the factory, ready for the installation of the burner. The larger No. G-135 furnace is not assembled.

E. E. SOUTHER IRON CO.

1952 Kienlen Ave. **St. Louis 20, Missouri**

Southaire

GAS FIRED GRAVITY FURNACES



Single port burner with pilot light and burner supporting platform.

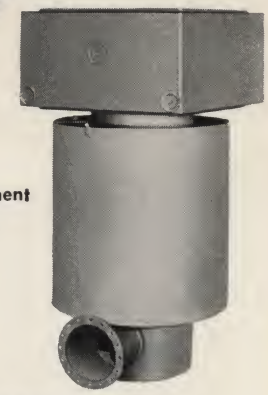
SINGLE PORT GAS BURNER

The new, simplified single port gas burner produces a clean flame and affords economical, trouble-free operation. The gas pressure regulator is equipped with an ingenious "STEPFLO" pressure regulating device which includes a slow opening feature to provide smooth, gradual, noiseless ignition. This device is A. G. A. approved and permits installation of the regulator without a bleed line.

The single port gas burner is equally suitable for all types of gas and gas mixtures.

The burner support insures perfect positioning of the burner and pilot in relation to the gas supply manifold and the combustion chamber.

A distinctive feature is the ease with which the burner can be removed from the combustion chamber without dismantling the gas manifold.



The steel heating element of No. G-86 Furnace.

THE HEATING ELEMENT

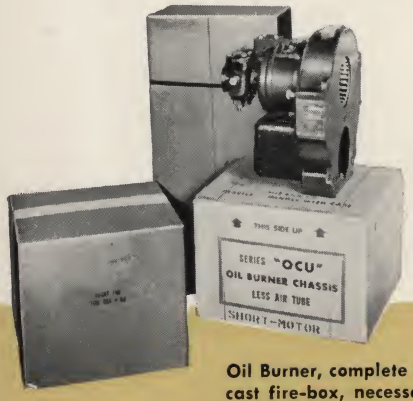
The steel heating element — combustion chamber and radiator — are arc welded to bond and seal joints making the heating element a one-piece, leak-proof unit.

The flame does not impinge at any point of the surface of the combustion chamber. Instead, heat from the flame is transmitted by radiation over the entire area. There are no hot spots that will burn out prematurely. Long operating life is assured by this important engineering factor.

The radiator is constructed so that all the hot gases of combustion must pass over all the heat transmitting surfaces of the radiator, before they enter the flue.

Radiator is equipped with readily accessible clean-out ports.

The radiation shield or radiation panels provide additional heat transfer surface, which explains the high capacity of these furnaces, and also contributes to the remarkably low fuel consumption.



Oil Burner, complete with all controls, precast fire-box, necessary parts and fittings which are available for converting furnace to oil firing.

CONVERTING INTO OIL FIRED UNITS

The No. G-110 and No. G-135 are designed and constructed for quick, easy changeover to oil burning by simply removing the gas burner, manifold and controls and installing the plate mounted Oil Burner. The No. G-86 furnace cannot be converted for oil firing.

The Gas fired units, when converted for oil burning, operate with the same high efficiency on Oil, as they do on Gas.

RATINGS

Unit No.	A. G. A. Approved for Natural, Manufactured, Mixed or Liquefied Petroleum Gas. Btu Input	Btu at Bonnet	Btu at Register	Approx. Shipping Weight
G-86	86,000	64,500	54,800	235
G-110	110,000	82,500	70,000	316
G-135	135,000	101,250	86,000	341

DIMENSIONS

Gas Unit No.	Oil Unit No.	Cabinet Width	*Cabinet Depth	Cabinet Height	Depth Draft Hood	Warm Air Plenum	Vent Dia.	Height Center Flue Opening
G-86	.....	26″	26″*	54″	6″	26″ x 26″	5″	55¼″
G-110	OG-72	25″	36″	55″	7″	22″ x 34″	6″	56¾″
G-135	OG-98	28″	44″	56″	8″	26″ x 42″	6″	57″

*Add 6″ for gas controls for Nos. G-86 and G-110.
Add 8″ for gas controls for G-135.

GAS PIPING

Unit No.	Nat.	Mfd.	Liq. Pet.
G-86	½″	½″	½″
G-110, G-135	½″	¾″	½″

FOR EFFICIENT . . . ECONOMICAL HEATING OF SMALL HOMES

Printed in U.S.A. 3584

NO. 287
Supercedes No. 240

The Distinctive *NEW*

Southaire

Gas Fired UNIT HEATER

. . . Economical

Dependable

Heating for . . .

Commercial, Industrial and Farm Buildings

Approved for Natural, Manufactured, Mixed or Liquefied Petroleum Gas.

E. E. SOUTHER IRON CO.

1952 Kienlen Ave. St. Louis 20, Missouri

Southaire Gas Fired Unit Heaters

Commercial, Industrial and Farm Building Heating with *Utmost Economy*

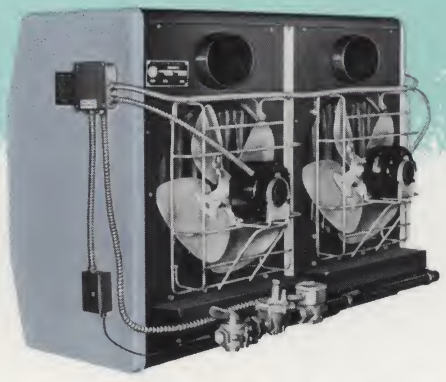
This new Gas Fired Unit Heater provides ideal heating for any non-residential building — completely automatically, and with refinements in design and construction that give it quieter operation and more efficient performance.

For installation in stores, showrooms or restaurants, this new Unit Heater has smart modern styling that makes it attractive but unobtrusive. For installation in garages, factories, warehouses, barns or other farm buildings, the more rugged construction of this unit makes it trouble-free.

Wherever it is installed, the excellent qualities of this Unit Heater appeal to those who want the finest, as well as to those who need efficient heating at lowest cost.

Front view of larger, Double-Unit Nos. XX-180 and XX-240 illustrates the distinctive styling. The two-tone enameled finish of charcoal and light grey blends with any color combination. Gracefully tapered front panels eliminate the usual "boxy" unit heater appearance.

Single-Unit construction is illustrated in rear view of No. XX-60, XX-90 or XX-120. One quietly operating fan is perfectly matched to the size and capacity of the heat exchanger.



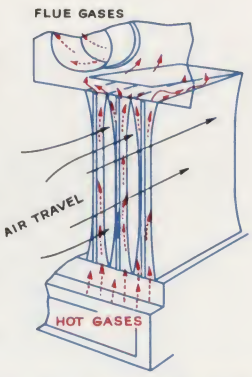
Double-Unit Nos. XX-180 and XX-240 are constructed with two heat exchangers, two fans, a common casing and gas manifold. The two smaller fans provide quieter and more uniform air delivery than one larger fan.

Unexcelled for *QUIET* Operation!

Superior Burner Design for Highest Gas

Shown at left, the Gas Burners are accurately positioned and secured in place at the factory, so that flame is not permitted to touch the combustion chamber or heat exchanger walls.

At right, the new Multi-Port Ribbon-Type Gas Burner, showing the tapered construction of the steel burner head, which delivers the gas-air mixture at a uniform pressure to the entire burner opening. Crimped stainless steel ribbons separate the fuel mixture into tiny jets that burn clean and smokeless. Pin-point air adjustment is made with the threaded adjusting screw.



Contour-Formed and Welded One-Piece Heat Exchanger

The Combustion Chamber, Heat Exchanger Sections, Draft Diverter and Flue Vent are die-formed from heavy-gauge steel — permanently joined together with electric arc welding. This one-piece assembly is completely leak-proof and gas-tight.

The Heat Exchanger Sections are shaped with smooth contours that permit a free flow of circulating air. The long heat travel removes all possible heat from the products of combustion before waste gases are exhausted.

Safe, Sure Suspension

At left, front view of built-in Draft Diverter which is an integral part of the heat exchanger. Safe, sure, speedy suspension of the unit heater is made from ¾" Pipe Thread. Sockets, supported by a rigid box-frame that is securely welded to the Heat Exchanger.

Quiet, Positive Air Control

Shown at left, Louvers which comprise the attractive front grille can be adjusted individually to direct and diffuse heated air where needed.

At right, the open design of the Fan Motor Support eliminates restriction of air flowing to fan blades — contributes to quieter operation.

Burning Efficiency

When the bottom casing panel is removed, Gas Burners and Pilot Assembly can easily be taken out. Inside surfaces of the Heat Exchanger can be inspected or cleaned at the same time. Burner ribbons can be removed from the burner head.

Outstanding in Design . . . Extra-Durable in Construction

Distinctively Styled Cabinet: — Modern contour-styling and neutral, two-tone grey finish provide a distinctively smart appearance.

Electrically Welded Construction: — Combustion Chamber, Heat Exchanger Sections, Draft Diverter and Flue Vent are one integral unit with all seams and joints electrically welded, leak-proof and gas-tight.

Heavy-Gauge Steel Heat Exchanger: — Heat Exchanger Sections are precision die-formed from heavy-gauge steel, the uniform thickness of which provides excellent heat transfer properties.

Stainless Steel, Multi-Port Burner Ribbons: — Resist indefinitely the heat and corrosive effects of combustion. Easily removable from burner head.

Accurately Positioned Burners: — Direct maximum heat to heat exchanger sections and prevent contact of flame with metal surfaces.

Adjustable Air Openings: — Accessible Air Ports are provided with threaded screws with precision adjustment.

Automatic Pilot and Stainless Steel Flame Runners: — Pilot and Thermocouple Lead are accurately located in relation to Burners. Flame Runners provide quicker, quieter ignition.

Gas Supply and Control Manifold: — Manual Gas Valve, Pressure Regulator, Pilot Safety Device, Automatic Gas Valve and Burner Orifice Spuds are mounted as a single unit, which is easily removed.

Heat Limit Control: — Limits temperature within heat exchanger to a pre-set maximum. Closes automatic Gas Valve in the event of fan motor failure.

Fan Control Switch: — Automatically starts the fan when temperature in Heat Exchanger has risen to desired level. Permits Fan to continue in operation until heat is exhausted. Sold as an accessory with 115 Volt Controls. Furnished as standard equipment with 24 Volt Controls.

Propellor Type Fan: — Statically and dynamically balanced fan blades are exactly pitched to supply the correct air velocity, quietly, over Heat Exchanger.

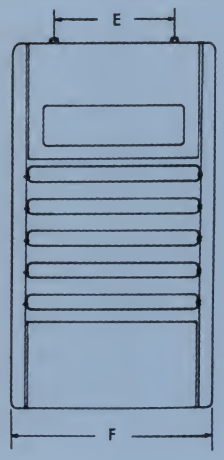
Rubber-Mounted Fan Motor: — Totally enclosed Electric Motor, with overload protection, is mounted with rubber end rings that absorb vibration.

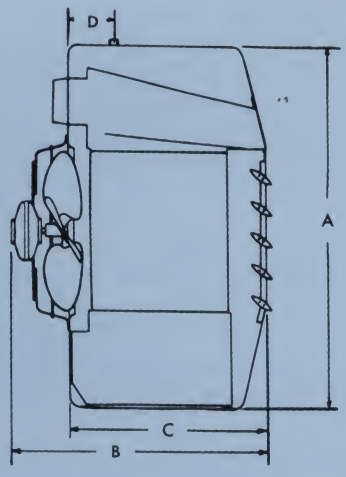
Welded Steel Motor Support: — Heavy gauge steel wire is formed and welded into a combination mounting bracket and fan guard. Open construction provides unobstructed flow of air to the fan blades for quieter operation.

Factory Assembled and Wired: — Shipped completely Wired and Assembled, ready for quick, safe and economical installation. Suspension from the ¾" Pipe Thread Sockets and connection of the Gas and Electric Supply Lines constitute virtually the entire installation.

Southaire

Gas Fired UNIT HEATERS





DIMENSIONS — INCHES

UNIT NO.	XX-60	XX-90	XX-120	XX-180	XX-240
A—Height	31½	31½	31½	31½	31½
B—Depth—Overall	24¾	24¾	24¾	24¾	24¾
C—Depth—Cabinet	17½	17½	17½	17½	17½
D—Hangers to Rear of Cabinet	5½	5¾	5¾	5¾	5¾
E—Width Between Hangers	8½	13	17½	30	39
Hangers—F.P.T.	¾	¾	¾	¾	¾
F—Width—Cabinet	16	18	22½	35	44
Flue Connection	4	5	6	(2)5	(2)6
Gas Manifold					
Natural and Mixed	½	½	½	¾	¾
Manufactured	½	½	¾	¾	¾
Liquefied Petroleum	½	½	½	½	½

RATINGS AND SPECIFICATIONS

UNIT NO.	XX-60	XX-90	XX-120	XX-180	XX-240
Input — Btu/Hr.	60,000	90,000	120,000	180,000	240,000
Output — Btu/Hr.	48,000	72,000	96,000	144,000	192,000
Equiv. Sq. Ft. of Steam Radiation	200	300	400	600	800
No. of Fans	1	1	1	2	2
Fan Motor H.P.	1/30	1/20	1/15	1/20	1/15
Fan Motor Voltage	115	115	115	115	115
Fan Motor R.P.M.	1060	1060	1060	1060	1060
Cubic Feet per Minute	630	950	1350	1910	2700
Temp. Rise — °F.	66	65	61	65	61
Air Throw — Feet *	32	40	52	56	60
Approx. Ship. Wt. — Lbs.	123	150	190	304	374

* Determined by Actual Measurement — distance at which Air Velocity is 100 Feet per Minute at the same height as the unit.

5 SIZES

Meet Practically Any Heating Requirement

These new Unit Heaters are built with BTU Inputs of 60,000 to 240,000. Used singly or in multiples, this range of capacity has proved most suitable for the majority of unit heater installations.

Where the heating capacity needed is greater than that of a single unit, the effect of zone control is gained through installing more than one unit heater. Such multiple installations result in a more uniform distribution of heat.

24 Volt Electrical Controls

These Unit Heaters are offered with a choice of 115 Volt or 24 Volt Electrical Control System. The 24 Volt System is supplied with a Thermostat and Fan Switch as standard equipment.

No. 292
Supersedes No. 215

Southaire

Premium materials and ingenious design make this new Gas Conversion Burner exceptional.

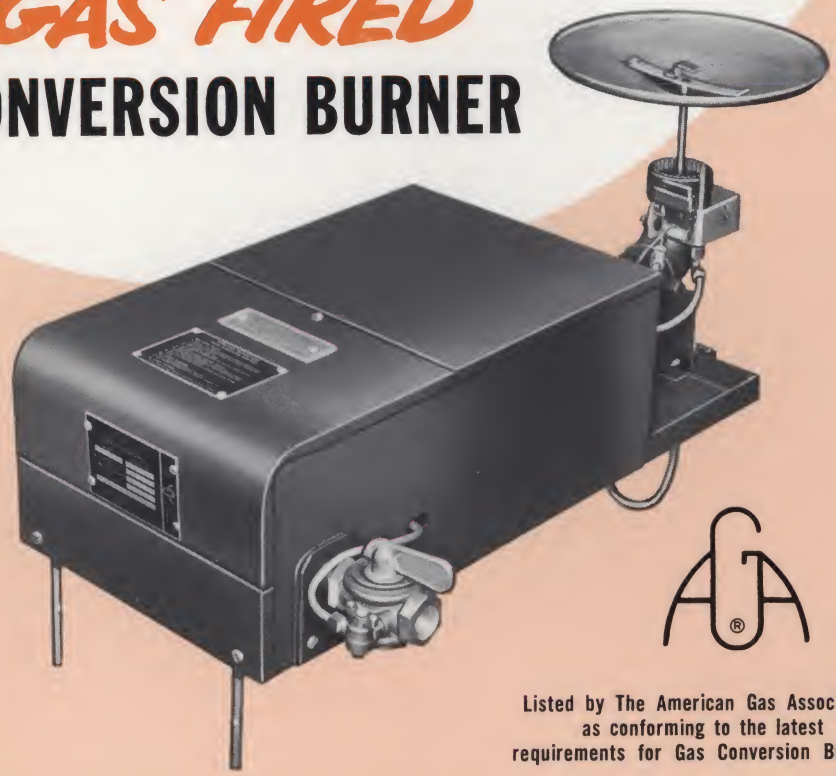
Burner head and tube are durable cast iron. Flame spreader, support pin and retention ring are corrosion-resistant stainless steel. The die-formed, electrically welded cabinet has a 14-gauge steel base and a 21-gauge duct.

The complete burner and pilot assembly are removable without disturbing the gas manifold. Easily adjusted mounting legs provide proper height and leveling.

The electrical system is the "self-energizing" type, in which electrical energy is generated by the pilot flame, making installation independent of an outside power source while simplifying wiring and permitting operation regardless of power failure.

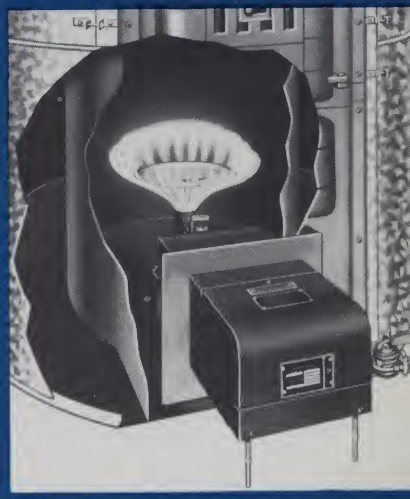
Unusually compact, the cabinet of this burner projects only a short distance outside of the furnace or boiler. A curved front access door and the charcoal grey finish make this short projection attractive but not conspicuous.

GAS FIRED
CONVERSION BURNER



Listed by The American Gas Association as conforming to the latest requirements for Gas Conversion Burners.

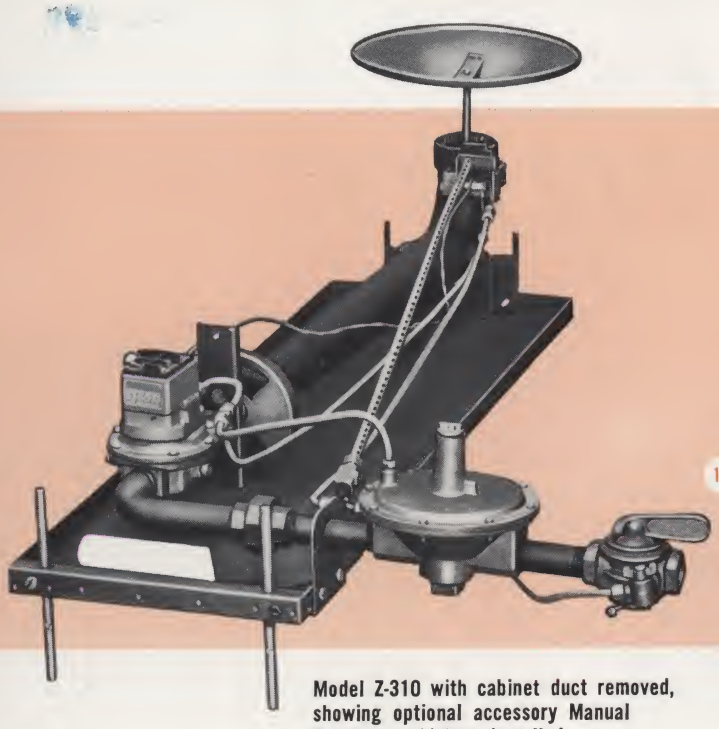
The gas burner head and tube and pilot assembly are easily removed without disturbing the gas manifold.



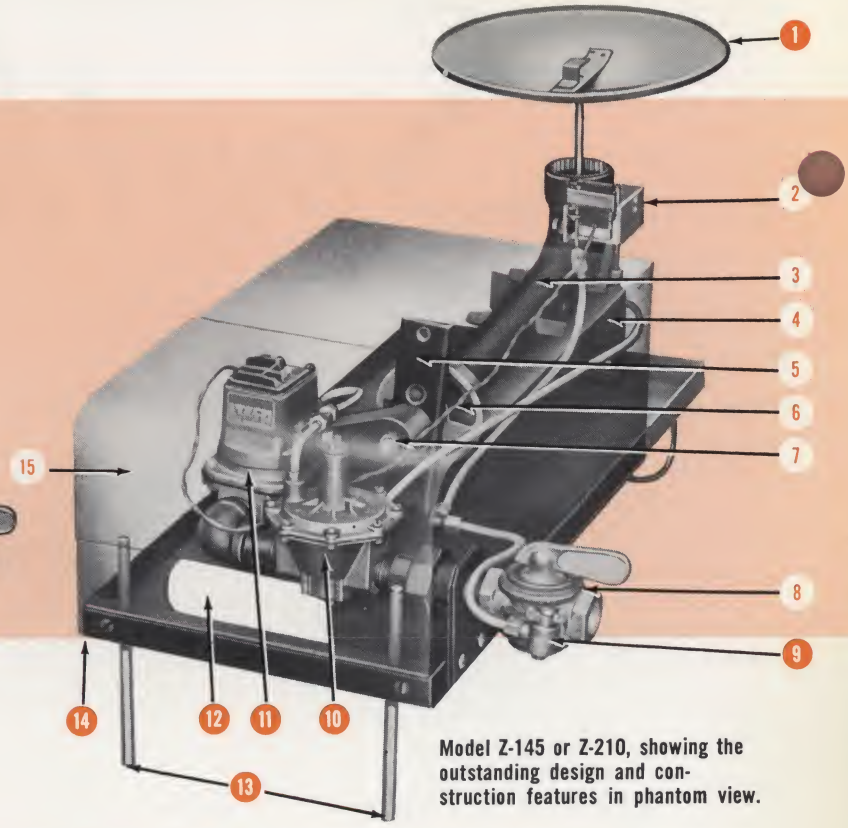
A typical installation, showing the wide flame spread with intense heat radiation in furnace or boiler combustion chamber.

E. E. SOUTHER IRON CO.

1952 Kienlen Ave. St. Louis 20, Missouri



Model Z-310 with cabinet duct removed, showing optional accessory Manual Pushbutton Lighter installed.



Model Z-145 or Z-210, showing the outstanding design and construction features in phantom view.

ADVANCED DESIGN . . . PREMIUM CONSTRUCTION

1. **FLAME SPREADER:** Stainless steel with stainless steel support pin and retention ring. Wide diameter provides wide flame dispersion, with maximum heat radiation and operating economy in furnace or boiler.

2. **PILOT AND PILOT GENERATOR:** Self-generating, non-linting pilot is securely mounted and accurately positioned on burner head for speedy ignition. Pilot-generated electrical source simplifies installation wiring, makes operation completely independent of outside electrical power.

3. **BURNER ASSEMBLY:** Single-port, self-piloting burner is constructed of cast iron for lifetime durability.

4. **FRONT BURNER SUPPORT:** Provides easy removal of burner assembly, positive location and rigid support of burner head.

5. **REAR BURNER SUPPORT:** Unique design permits removal of complete burner and pilot assembly without disturbing the gas manifold or controls.

6. **PRIMARY AIR SHUTTER:** Readily accessible for adjustment of gas-air fuel mixture. Equipped with locking screw.

7. **SPUD HOLDER:** Permits change of orifices to vary burner input. Burner is shipped with orifice installed for lowest rated input. Additional orifice sizes are supplied with each burner for full range of inputs.

8. **MAIN MANUAL GAS VALVE:** Standard equipment.

9. **PILOT MANUAL GAS VALVE:** Standard equipment.

10. **GAS PRESSURE REGULATOR:** Factory adjusted for factory-installed orifice. Readily adjustable for use with other orifice sizes, when input is varied.

ROOM THERMOSTAT: Supplied as standard equipment.

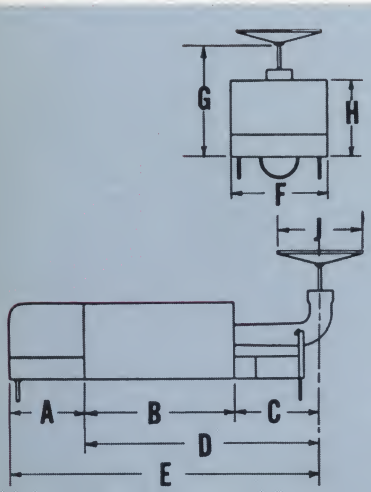
11. **AUTOMATIC GAS VALVE:** Diaphragm type, pilot generated valve affords quiet, positive operation at all times. Makes electrical system independent of outside electrical supply.

12. **SECONDARY AIR SHUTTER:** Semi-circular design provides plentiful air supply with easy adjustment up to 180° opening. Equipped with locking screw.

13. **MOUNTING LEGS:** Conveniently adjustable for height or leveling. U-shaped front support is also adjustable. All supports equipped with positive locking device.

14. **CABINET BASE:** Constructed of 14-Gauge Steel for rigid support with utmost stability.

15. **CABINET ACCESS DOOR:** Attractively curved panel provides a large opening, when removed for adjustment of controls or removal of burner and pilot assembly.



A. G. A. RATINGS ▶

MODEL NO.	INPUT — BTU/HR. Nat., Mfd. or Mixed Gas*	OUTPUT — 72% EFFICIENCY Btu/Hr.	Sq. Ft. Steam	Sq. Ft. Hot Water	Max. Grate Area — Sq. Ft.	Min. Grate Dim. — In. Round	Rect.
Z-145	Min. 50,000	36,000	150	240	1.0	12	11x11
	Max. 145,000	104,000	435	690	3.0	16	12x18
Z-210	Min. 50,000	36,000	150	240	1.0	12	11x11
	Max. 210,000	151,000	630	1000	4.0	20	15x21
Z-310	Min. 100,000	72,000	300	480	2.0	14	12x14
	Max. 310,000	223,000	920	1490	6.0	26	20x28

* Max. Btu/Hr. Inputs with Liquefied Petroleum Gas are: No. Z-145 . . . 145,000; No. Z-310 . . . 270,000; No. Z-210 is not rated or available for L.P. Gas.

DIMENSIONS — INCHES ▶

MODEL NO.	A	B	C	D	E	F	G	H	J	GAS MANIFOLD Nat.	Mfd. & Mixed	Liq. Pet.
Z-145	8	10	8 7/16	18 7/16	26 7/16	11	9¼	7	10	½	¾	½
Z-210	8	10	8 7/16	18 7/16	26 7/16	11	9¼	7	10	¾	¾	*
Z-310	8	10	17⅝	27 5/16	35 5/16	11	10½	8	10	¾	1¼	¾

Southaire

YEARS AHEAD

Oil Fired... ASSEMBLED AND WIRED

WINTER AIR CONDITIONING FURNACES

THE WINTER AIR CONDITIONER . . . Compact! Good Looking! Attractive New Design!

THE COUNTERFLOW UNIT . . . Advanced Construction for Basementless Homes!

THE WINTER AIR CONDITIONER with Cooling Coil installed . . . Add Summer Cooling Anytime!

THE WINTER AIR CONDITIONER with Accessory Return Air Cabinet . . . Readily Installed at Rear or Either Side!

E. E. SOUTHER IRON CO.

1952 Kienlen Ave. St. Louis 20, Missouri

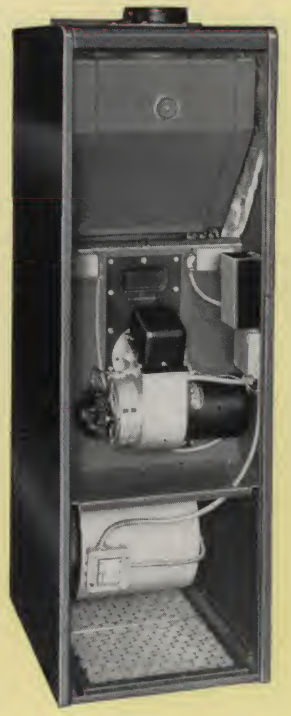
Southaire YEARS AHEAD

WINTER AIR CONDITIONERS . . . COUNTERFLOW UNITS

Totally new in design and so compact that it can be installed virtually anywhere, this Oil Fired Winter Air Conditioner excells with construction and operating features that are *years ahead.*

Concealed completely from view, the Oil Burner and Controls are housed within a handsome Cabinet that has no unsightly projections. This cabinet is rigidly constructed of 21-gauge steel, heavily coated with baked enamel in two tones of charcoal and light grey that are pleasing but inconspicuous.

Easier and speedier installation is provided by factory assembly and wiring of this advanced Oil Furnace, which is so complete that the installer needs only to connect the oil line, electrical supply and ducts.



Front Cabinet Panels are removed from the Winter Air Conditioner, illustrating the complete factory assembly with Oil Burner and all Controls mounted and wired.

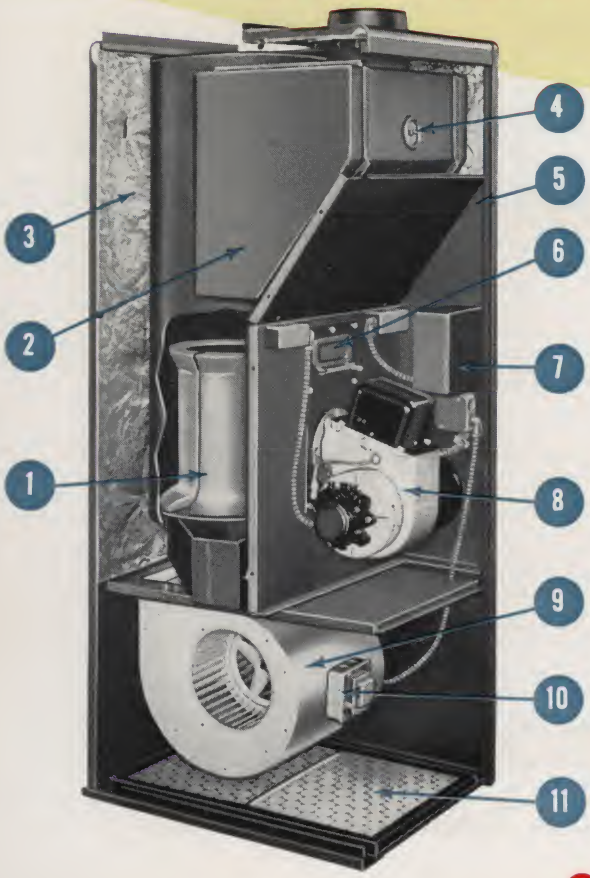
The factory assembled and wired Oil Counterflow Unit, for basementless homes, is equally compact and good looking, and affords the same advantages of construction and performance.

Practically noiseless operation is assured by the combination of the quiet Oil Burner with the Round Combustion Chamber and the Refractory Firebox which, together, eliminate expansion and contraction noises.

Utmost efficiency of operation is achieved by the long travel of air over the primary heating surfaces of the Combustion Chamber and by the large secondary heating surfaces of the Front Radiator, which transfer every possible Btu of heat to the air circulated by the Blower.

The Counterflow Unit with Front Panels removed, showing the Blower-Filter compartment located at the top and the complete assembly and wiring job done at the factory.

YEARS AHEAD DEVELOPMENTS IN DESIGN . . . AND CONSTRUCTION



1. FACTORY-INSTALLED FIREBOX is the heavy-duty refractory-type, securely fastened for shipment with steel brackets welded to the heat exchanger.

2. HEAVY GAUGE HEATING ELEMENT, with Round Combustion Chamber and Front-Mounted Radiator, is constructed of 14-gauge steel for No. HO-112 and 16-gauge for Nos. HO-79 and HOC-79.

3. INSULATION is a thick layer of glass fibers faced with heavy aluminum foil.

4. FRONT CLEANOUT PORT can be reached easily, when the top cabinet panel is removed.

5. RIGID CABINET is die-formed of 21-gauge steel. Deep-drawn channels in the attractively rounded side panels afford unusual sturdiness.

6. SPRING-HINGED OBSERVATION DOOR permits convenient inspection of the flame pattern.

7. BURNER RELAY part of the Primary Control is factory-wired to the Flame Detector part, making it unnecessary for the installer to install a stack switch on the flue vent, or to wire any portion of the Burner Relay Circuit on the job. All interior wiring is done at the factory.

8. GUN-TYPE OIL BURNER, which is installed at the factory, has a Flame Detector device attached to the burner nozzle tube, rather than a stack switch on the flue pipe. This Flame Detector reacts to the heat of the flame, causing the Relay to close when fire is present, and causing the Relay to open, and stop the Burner, in the event of an absence of fire in the firebox.

9. ACCESSIBLE BLOWER is easily reached by sliding forward the panel to which it is bolted.

10. 115 VOLT CONNECTION is readily made in conveniently located junction box.

11. SLIDE-OUT FILTER is easy to replace. Bottom air intake is standard with the upflow unit. Filters of the counterflow unit are located at the top of the cabinet.

Oil Burner, Refractory Firebox, all Controls

OIL FIRED WINTER AIR CONDITIONING FURNACES

EXCEL IN STYLING . . . PERFORMANCE . . . SERVICEABILITY

The Oil Burner of this completely modern Winter Air Conditioner is installed at the factory, with the electrical circuit of the Burner Relay completely wired, so that it is unnecessary for the installer to attach a stack switch to the flue pipe and wire it to the burner on the job.

The Flame Detector part of the PerfXray Primary Control, which is used with this furnace, is mounted on the burner nozzle tube at the factory. This Flame Detector is a mechanical device that prevents the burner from delivering oil in the event of ignition failure.

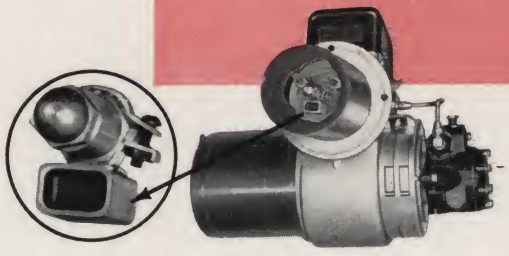
The Relay part of the Primary Control is installed inside the vestibule of the furnace. All wiring, necessary to connect the Relay to the Flame Detector and the Burner, is done at the factory. None remains to be done on the job.

The efficient Gun-Type Oil Burner produces a clean fire with the correct flame pattern. A patented "no-drip" device prevents smoking, carbonizing and sooting at the nozzle. The air control is easily adjusted and the double-hinged transformer makes the burner fan and electrode assembly easy to reach.

Oil Burner and Firebox are FACTORY INSTALLED

The rugged Heat Exchanger with Round Combustion Chamber is 14-gauge steel for No. HO-112 and 16-gauge for Nos. HO-79 and HOC-79.

The Refractory Fire-Box is shown ready for factory installation inside the Heat Exchanger.



The Gun-Type Oil Burner. Enlargement, at left, shows the Flame Detector mounted on the Oil Nozzle Tube, with arrow pointing to the Flame Detector.

Shown above, at left, is the Heat Exchanger, with Round Combustion Chamber and Front-Mounted Radiator, made into a leak-tight and gas-proof chamber by advanced methods of electrical welding. The Radiator is of more than ample size to remove all the heat possible from hot combustion gases, before they can enter the flue. The base of this heat exchanger is raised on steel supports so that air circulated by the blower also wipes heat from this surface, as well as from the sides and radiator.

The Precast Refractory Firebox, shown above at center, is installed at the factory. Although secured within the heat exchanger by the burner air tube and welded flanges, this firebox can be removed if ever necessary.

Removing the Heat Exchanger

Removing the Blower Assembly

All Inspection or Service . . . from the FRONT

Because all operating parts of this entirely new Winter Air Conditioner are made accessible by removing the front panels, it is not necessary to disturb the plenum chamber or ductwork for inspection or maintenance.

The illustration, at far left, shows the oil burner, controls, front and top cabinet panels removed, so that the heat exchanger can be taken out (without disturbing plenum chamber and ductwork).

The illustration, at near left, shows how, when one cabinet panel is removed, the blower and motor readily slide forward on the panel to which they are bolted.

Factory Assembled . . . Factory Wired . . . for Quick, Easy Installations!

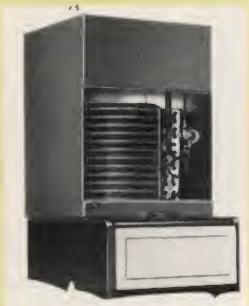
OIL FIRED WINTER AIR CONDITIONING FURNACES

Optional Return Air at REAR or Either SIDE

Assembled, at left, is the Return Air Cabinet (an accessory) which is enameled to match the furnace cabinet and can be installed on the rear or on either side. Inside rails support the filter, which is easily replaced through a door in the rear panel. This cabinet is shipped knocked-down in a compact carton and is quickly assembled by one man.

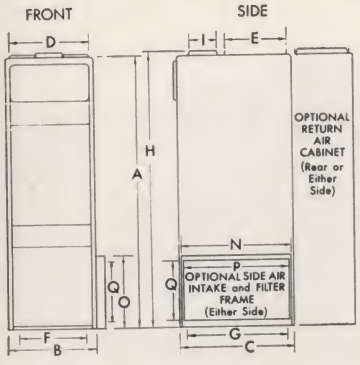
Assembled to the furnace cabinet, at right, is the galvanized Side Air Intake and Filter Frame (an accessory), which can be installed on either side of the furnace and permits the filter to be pulled out from the front. Shipped knocked down, this frame is quick and easy to assemble.

Knock-outs in the rear and side panels of the cabinet guide the cutting of proper size openings for Return Air Cabinet or Side Air Intake.



CONVERT for Summer Cooling, at ANYTIME

This new Oil Fired Winter Air Conditioner is so designed that a belt-driven Blower, larger in capacity than that which is standard equipment, can readily be installed if needed to provide extra air delivery for a summer air conditioning cooling coil. When so equipped, this furnace will provide the extra Air Delivery values as indicated on the Table below, and determined by actual test.



DIMENSIONS IN INCHES

UPFLOW UNITS

Furnace Cabinet

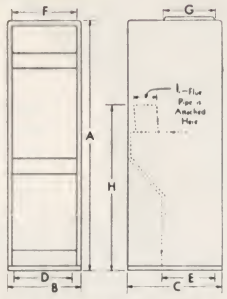
UNIT NO.	HO-79-D	HO-79	HO-112
A — Height	62	62	67
B — Width	20	20	24
C — Depth	26	26	32
H — Ht. to Top of Flue Collar	63½	63½	68½
I — Flue Diameter	6	6	6
D x E — Warm Air Plenum	18x14	18x14	22x20
Plenum Number	#24	#24	#56
F x G — Return Air Plenum	14x22	14x22	18x22
Plenum Number	#26	#26	#46
Filter Size	16x25x1	16x25x1	20x25x1

Optional Return Air Cabinet

Depth	16⅛	16⅛	16⅛
Width	20	20	24
Return Air Plenum	18x14	18x14	22x14
Plenum Number	#24	#24	#26

Optional Side Air Intake

N — Width	25¼	25¼	25¼
O — Height	16¼	16¼	20¼
P x Q — Return Air Plenum	24x14	24x14	24x18
Plenum Number	#27	#27	#47



COUNTERFLOW UNITS

UNIT NO.	HOC-79-D	HOC-79
A — Height	69	69
With Accessory Combustible Floor Frame and Base	72	72
B — Width	20	20
C — Depth	26	26
H — Ht. to Top of Flue Collar	46½	46½
I — Flue Diameter	6	6
D x E — Warm Air Plenum (with or without Combustible Floor Frame)	16x14	16x14
Plenum Number	#23	#23
F x G — Return Air Plenum	14x18	14x18
Plenum Number	#24A	#24A
Filter Size	(3)8x16x1	(3)8x16x1

RATINGS

UPFLOW UNITS					COUNTERFLOW UNITS				
UNIT NO.	Btu Input at Burner	Gallons per Hour	Btu at Bonnet	Approx. Ship. Wt. — Lbs.	UNIT NO.	Btu Input at Burner	Gallons per Hour	Btu at Bonnet	Approx. Ship. Wt. — Lbs.
HO-79-D*	98,000	0.70	78,400	296	HOC-79-D*	98,000	0.70	78,400	292
HO-79	98,000	0.70	78,400	296	HOC-79	98,000	0.70	78,400	292
HO-112	140,000	1.00	112,000	385					

*Equipped with Direct Drive Blower.

Rated in accordance with U. S. Dept. of Commerce Commercial Standard No. CS-195

MAXIMUM AIR DELIVERIES with STANDARD and OPTIONAL ★ BLOWER and MOTOR COMBINATIONS

UNIT NO.	Blower No.	Motor H.P.	Standard or Optional	Speed Control No. or Drive Combination	AIR TEMPERATURE RISE: °F WITH EXTERNAL STATIC PRESSURE IN INCHES OF WATER					CUBIC FEET per MINUTE at EXTERNAL STATIC PRESSURE in INCHES of WATER				
					.15	.20	.30	.40	.50	.15	20	.30	.40	.50
HO-79-D	9-9D	1/6	Std.	17104	90	93	101	....	....	795	770	710	....	....
				Removed	80	83	89	96	108	900	870	810	745	665
HO-79	9-9	1/6	Std.	3¼x6	78	83	96	....	....	920	870	750	....	....
	9-9	1/4	Opt.	3¼x5	66	68	73	78	87	1090	1060	990	920	830
	10-8	1/2	Opt.	4x6	54	55	56	58	60	1330	1320	1290	1245	1190
HO-112	10-10	1/4	Std.	3¼x7	74	77	86	107	....	1380	1330	1190	960	....
	10-10	[1/3	Opt.	3¼x6	....	....	....	75	84	....	....	....	1370	1220
		1/2	Opt.	3¼x6	61	63	68	75	84	1680	1620	1500	1370	1220
	10-10	1/2	Opt.	4x7	54	55	59	62	67	1910	1860	1750	1650	1540
	12-12	3/4	Opt.	4x7	....	47	51	55	60	....	2170	2020	1870	1720
HOC-79-D	9-9D	1/6	Std.	None	89	92	100	114	....	810	780	715	630	....
HOC-79	9-9	1/4	Std.	3¼x5	....	70	75	81	92	....	955	955	880	780
	9-9	1/3	Opt.	3¼x5	68	70	75	81	92	1050	1020	955	880	780

★ Optional at additional cost — Blower and Motor, or Motor and Drive Combination for Additional Air Deliveries as indicated.

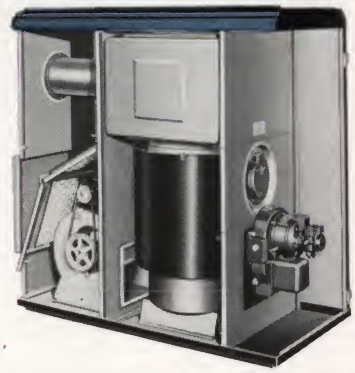
Printed in U.S.A. 9595

No. 293
Supersedes
No. 283

.Southaire

OIL FIRED Basement Type Air Conditioning Units

Oil Fired Basement Type Air Conditioning Unit with Vestibule and Hinged Door



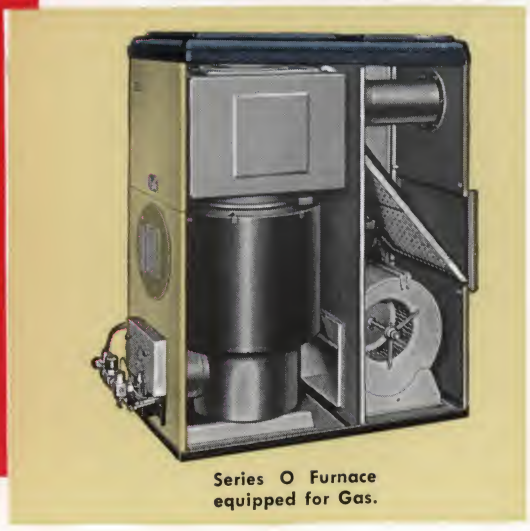
Illustrations show Units with Built-In Vestibule and Hinged Door. Above, Series O—Unit No. O-71-D, O-71, O-86, O-114, O-158 or O-192—is shown with OCU Oil Burner installed. Series OW—Unit No. OW-72-D, OW-72, OW-82 or OW-95—is similar in appearance but is available with OE Oil Burner only.

E. E. SOUTHER IRON CO.
1952 Kienlen Ave. St. Louis 20, Missouri

The *Southaire* Oil Fired Basement Air Conditioning Unit Equipped with *Southaire* Oil Burner

Interior view of Series OW Units with Exposed Burner—No. OW-72-ED, OW-72-E, OW-82-E or OW-95-E—showing OE Oil Burner and Controls installed. Series OW is available with the OE Burner only and is assembled and wired at the factory. Series O Units—No. O-71-ED, O-71-E or O-86-E—are available with either the OCU or OE Burner and are shipped partially assembled, ready for installation of Burner, Firebox and Controls.

Winter Air Conditioning Unit with Vestibule and Hinged Door. Series O—No. O-71-D, O-71, O-86, O-114, O-158 or O-192—and Series OW—No. OW-72-D, OW-72, OW-82 or OW-95. Nos. OW-72-D, OW-72, OW-82 and OW-95 are shipped Assembled and Wired.



Series O Furnace equipped for Gas.

Gas Conversion Kits for Series O Units are listed by the American Gas Association for Natural, Manufactured, Mixed or Liquid Petroleum gas.

- Southaire Quality assures the finest in modern heating and air conditioning in these superbly designed and constructed oil fired basement air conditioning units.

Smartly styled cabinet with die-formed, rounded corners. Baked enamel inside and outside.

Radiators are readily accessible for inspection or cleaning.

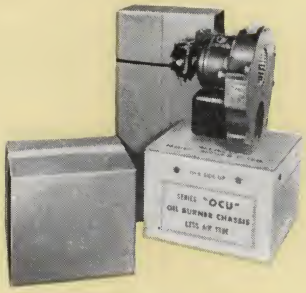
Round Combustion Chambers eliminate expansion and contraction noises. Gas-tight, durable, efficient.

The Radiation shield absorbs heat radiated by combustion chamber. Increases heating surface and heating capacity. Keeps outer cabinet relatively cool.

Metal floor is welded to effect one piece construction, preventing infiltration of dusty basement air. No grouting is necessary.

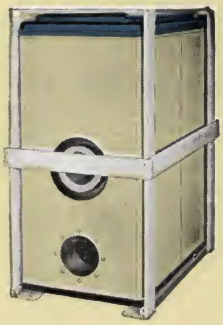
Door at rear of cabinet provides easy access to blower, motor, filters. Cabinet panel below door can be quickly taken out for removal of blower.

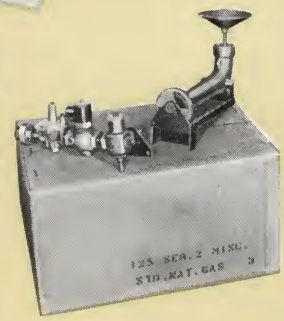
Installation or Conversion for Either Fuel So Easy With *Southaire*



Packaged OCU Oil Burner, complete with all controls, pre-cast refractory fire-box, necessary parts and fittings for complete oil-fired installation. Available for Series O Units only.

Partially assembled Series O, Exposed Burner Unit, crated before cardboard protective wrapping is inserted inside of crate. Ready for the installation of either the Oil Burner or the Gas Burner.

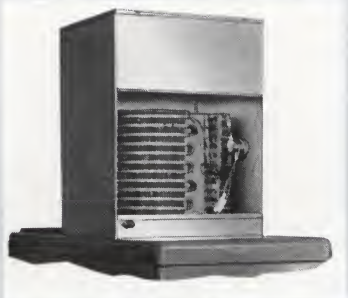




Packaged Gas Burner for Series O Units complete with all controls, necessary parts and fittings for a complete gas-fired installation.

Durable–Ruggedly Constructed Heating Elements

Heating Element for Series O, Oil Fired Basement Unit. Element for Series OW is similar, but has a Rectangular Burner Pouch.



Plenum For Cooling Coil

Optional Accessory, Galvanized Plenum provides for later installation of Plenum Type Cooling Coil with Series O Units. Plenum has top and is high enough so that ducts can be taken off both sides. Cooling Coil easily slides into Plenum.

Available at low cost in three sizes, for 2, 3 and 5 Ton capacity Cooling Coils. Shipped knocked-down, carton-packed.

THE HEATING ELEMENT

• The heating elements are made of heavy gauge steel. Welded seams insure a permanently leakproof, gas-tight unit.

Steel supports raise the combustion chamber from the base of the cabinet, allowing the circulating air to impinge on the base of the heating element, thereby extracting all the heat possible from the heating surfaces.

Radiation shield surrounding the combustion chamber intercepts radiant heat and reduces heat loss through the outer cabinet.

Tubular and square radiators, welded gas-tight, extract the heat from the products of combustion before they pass into the flue.

CABINET FEATURES

The smartly styled cabinet with die-formed rounded corners, has a smooth, glossy, baked enamel finish that is easy to keep clean.

Heavy gauge steel provides a substantial, rigid cabinet. Die-formed cabinet sections assure ease and speed in assembly.

Interlocking slip joints provide a tight, leakproof assembly.

The cabinet for larger units has a hinged door which is easily opened and closed. Ingenious design provides the necessary air for efficient combustion without dust-catching louvres, to mar the attractive appearance of the cabinet.

A heavy, one-piece base which includes a securely welded metal floor completes the dust-tight, leakproof cabinet. This base does not require grouting.

A removable cabinet panel exposes radiator clean-out ports for inspection or cleaning.

Southaire Oil Fired Basement Type Air Conditioning Unit

RATINGS

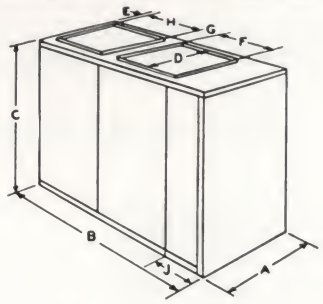
Rated in Accordance with U. S. Dept. of Commerce Commercial Standard No. CS-195

UNIT NO.	Btu Input at Burner	Gallons Per Hour	Btu at Bonnet	Btu at Register	Filters No.	Filters Size	Approx. Ship. Wt. Lbs.
SERIES O OCU or OE Burner—Unit Nos. O-71-ED, O-71-E and O-86-E—shipped with Casing, Heating Element, Blower and Motor Assembled							
O-71-ED	105,000	.75	84,000	71,400	1	(16x25)	410
O-71-E	105,000	.75	84,000	71,400	1	(16x25)	410
O-71-D	105,000	.75	84,000	71,400	1	(16x25)	448
O-71	105,000	.75	84,000	71,400	1	(16x25)	448
O-86-E	126,000	.90	100,800	85,700	1	(20x25)	478
O-86	126,000	.90	100,800	85,700	1	(20x25)	511
O-114	168,000	1.20	134,500	114,000	2	(16x20)	601
O-158	231,000	1.65	185,000	157,000	4	(16x20)	829
O-192	280,000	2.00	224,000	191,000	4	(16x20)	921
SERIES OW OE Burner only—(All Units Completely Assembled and Wired with Burner, Controls and Refractory Firebox Installed.)							
OW-72-ED	105,000	.75	84,000	71,400	1	(16x25)	376
OW-72-E	105,000	.75	84,000	71,400	1	(16x25)	386
OW-72-D	105,000	.75	84,000	71,400	1	(16x25)	392
OW-72	105,000	.75	84,000	71,400	1	(16x25)	402
OW-82-E	119,000	.85	95,000	80,750	2	(10x20) 1 (8x16)	386
OW-82	119,000	.85	95,000	80,750	2	(10x20) 1 (8x16)	402
OW-95-E	140,000	1.00	112,000	95,200	2	(15x20)	440
OW-95	140,000	1.00	112,000	95,200	2	(15x20)	458

Unit Nos. O-71-ED, O-71-D, OW-72-ED and OW-72-D are equipped with Direct Drive Blowers.

RATINGS WHEN EQUIPPED FOR GAS

UNIT NO. Gas	SERIES O UNIT NO. Oil	A.G.A B.T.U. Input
A-105-ED	O-71-ED	105,000
A-105-E	O-71-E	105,000
A-105-D	O-71-D	105,000
A-105	O-71	105,000
A-125-E	O-86-E	126,000
A-125	O-86	126,000
A-150	O-114	150,000
A-210	O-158	210,000
A-260	O-192	260,000



DIMENSIONS—INCHES

UNIT NO.	A Cabinet Width	B Cabinet Depth	C Cabinet Height	D x F Warm Air Plenum	D x H Return Air Plenum	E	G	J	Flue Dia. Oil	Flue Dia. Gas	Ht. Flue Opening Oil	Ht. Flue Opening Gas
SERIES O												
O-71-ED, O-71-E	20	†36	52½	18x16	18x14	2	2	—	6	5	44	54
O-71-D, O-71	20	49½	52½	18x16	18x14	2	2	12½	6	5	44	54
O-86-E	25	†42	52½	22x20	22x16	1	3	—	6	6	44⅛	54½
O-86	25	55½	52½	22x20	22x16	1	3	12½	6	6	44⅛	54½
O-114	26	60	57	22x22	22x18	1	4	12½	7	6	44⅜	55½
O-158	36	76½	54	32x32	32x24	2	4	12½	9	7	44⅛	58⅛
O-192	36	76½	54	32x32	32x24	2	4	12½	9	8	44⅛	58⅛
SERIES OW												
OW-72-ED, OW-72-E	20	†36	51	18x16	18x14	2	2	—	5	—	44	—
OW-72-D, OW-72	20	45½	51	18x16	18x14	2	2	8½	5	—	44	—
OW-82-E	20	†36	51	18x16	18x14	2	2	—	6	—	44⅛	—
OW-82	20	45½	51	18x16	18x14	2	2	8½	6	—	44⅛	—
OW-95-E	25	42	52	22x20	22x16	1	3	—	6	—	44⅛	—
OW-95	25	51½	52	22x20	22x16	1	3	8½	6	—	44⅛	—

†On O-71-ED, O-71-E and O-86-E add approx. 12½" for projection of OCU Oil Burner. Approx. 8½" for OE Oil Burner.

MAXIMUM AIR DELIVERIES WITH STANDARD AND OPTIONAL ★ BLOWER MOTORS

UNIT NO.	Blower No.	Blower Motor H.P.	Speed Control or Drive Combination	Air Temperature Rise: °F—With External Static Pressure in Inches of Water 0.15	0.20	0.30	0.40	0.50	Cubic Feet Per Minute at External Static Pressure in Inches of Water 0.15	0.20	0.30	0.40	0.50
O-71-ED, OW-72-ED	9-9D	½	17001	91	95	102	—	—	847	813	755	—	—
O-71-D, OW-72-D			Removed	83	85	94	101	—	930	907	820	763	—
O-71-E, OW-72-E	9-9	⅙	3¼x6	85	87	94	109	—	906	885	818	706	—
O-71, OW-72		★¼	3¼x5	66	69	73	79	83	1162	1112	1052	973	927
OW-82-E, OW-82†	9-9	¼	3¼x5	—	85	—	—	—	—	1030	—	—	—
O-86-E	10-10	¼	3¼x7	—	77	85	100	—	—	1190	1080	917	—
O-86		★⅓	3¼x6	—	65	72	80	88	—	1410	1274	1145	1040
OW-95-E, OW-95†	10-10	¼	3¼x6	—	85	—	—	—	—	1210	—	—	—
O-114	10-10	¼	3¼x7	—	102	111	—	—	—	1210	1110	—	—
		★⅓	3¼x6	—	89	96	103	—	—	1390	1280	1200	—
O-158	12-12	⅓	3¼x8	—	71	79	86	103	—	2376	2155	1977	1640
		★½	4x9	—	59	64	68	75	—	2860	2660	2497	2270
O-192	15-15	½	4x12	—	66	74	83	99	—	3110	2790	2488	2070
		★¾	4x11	—	—	63	69	79	—	—	3255	2985	2622

★Optional Motor and Drive Combination for Additional Air Deliveries as Indicated. †Unit Nos. OW-82-E, OW-82, OW-95-E and OW-95 available only with Standard Blower Motor.

Printed in U.S.A. 3594

No. 253
Supersedes
No. 251

OIL FIRED COUNTERFLOW UNITS

Southaire

OIL FIRED UTILITY UNITS

E. E. SOUTHER IRON CO.
1952 Kienlen Ave. St. Louis 20, Missouri

Southaire

OIL FIRED COUNTERFLOW UNITS

UTILITY AIR CONDITIONING UNITS

Counterflow Unit with Gun Type Oil Burner

Utility A. C. Unit with Gun Type Oil Burner

Easily...Quickly
Converted for Gas
Anytime

Counterflow Unit equipped with Gas Burner

Utility Unit equipped with Gas Burner

Units when equipped with A. G. A. approved Gas Burner are approved for Natural, Manufactured, Mixed and Liquefied Petroleum Gas

Oil Fired Counterflow Units and Utility A. C. Units are available, listed by Underwriters' Laboratories for less than standard clearance.

Gas Fired Counterflow and Utility Units are available, listed by A. G. A. for less than standard clearance.

THE COUNTERFLOW UNIT

The Counterflow Unit For Crawl Space . . . Slab Floor . . . Basementless Installation

The Counterflow Unit has been developed for installation in houses or other buildings which are constructed with a concrete slab floor, or in any basementless house where it is desired to discharge the warm air directly into pipes or ducts located either in the floor, or in a crawl space below the floor.

The Counterflow Unit differs from the Utility Unit only in the position of the blower. In the Counterflow Unit, the direction of air flow is *downward*. In the Utility Unit the direction of air flow is *upward*.

The compact and attractive enameled steel cabinet houses the rugged, welded steel heating element. The large capacity radiator surrounding the upper section of the combustion chamber extracts practically all the heat produced. The steel, heat absorbing radiation shield increases the heating efficiency and also prevents heat loss through the cabinet walls. A special control shuts off the burner in case of blower failure.

Both Counterflow and Utility units are factory assembled for quick easy installation.

The Space-Saving Utility Unit

The compact Utility Unit has been designed especially for installation in the utility room or in a closet of the basementless home. It is similar in construction to the Counterflow Unit, except for the position of the blower. For utmost flexibility of installation, the return air intake can be located either at the bottom or the side of the cabinet.

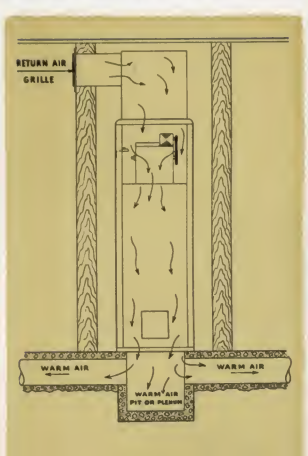
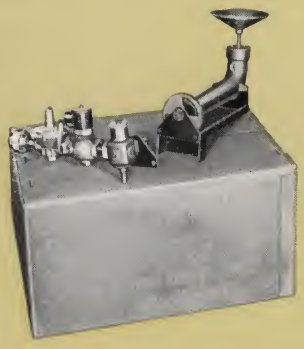


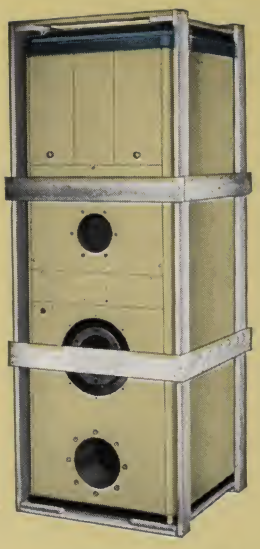
Illustration showing compact Counterflow Unit installation on concrete slab floor.

INSTALLATION or CONVERSION for EITHER FUEL SO EASY with Southaire

Packaged Oil Burner, complete with all controls, pre-cast fire-box, necessary parts and fittings for a complete oil fired installation.



Packaged Gas Burner, complete with all controls, necessary parts and fittings for a complete gas fired installation.



Assembled unit, crated before cardboard protective wrapping is inserted inside of crate. Ready for the installation of either the Oil Burner or the Gas Burner.

DURABLE – RUGGEDLY CONSTRUCTED HEATING UNIT

THE HEATING ELEMENT

The durable, ruggedly constructed heating elements of both the Counterflow and Utility Units are made of heavy gauge steel. Seams are automatically welded by the submerged arc welding process to insure permanent leak-proof construction.

Steel supports raise the combustion chamber from the cabinet base, allowing the circulating air to flow around on the base of the combustion chamber, thereby extracting all possible heat from the heat producing surfaces.

The heat-absorbing radiation shield surrounding the combustion chambers is positioned to intercept and utilize the maximum radiant heat, and to insulate the outer cabinet.

THE RADIATOR

The steel radiator, welded gas-tight, encircles the upper part of the combustion chamber. All possible heat from the products of combustion is extracted before it can enter the flue. Radiator is equipped with clean-out ports which make inspection or cleaning an easy operation.

THE CABINET

The smartly styled cabinet with die-formed rounded corners, has a smooth, glossy, baked enamel finish that is easy to keep clean and is handsome in appearance.

Trim panels of heavy gauge steel are fastened into a rigid, tight unit with interlocking slip joints.

Both the Counterflow and the Utility Unit are factory-assembled, ready for installation of the burner.

The completely fabricated, welded steel, heat exchanger showing radiator clean-out ports

Southaire

OIL FIRED COUNTERFLOW UNITS

UTILITY AIR CONDITIONING UNITS

Attaching the Oil Burner Chassis to mounting plate of Counterflow Unit

Plate Mounted Oil Burner Quick — Easy to Install

Installation of this burner is unbelievably simple. It is virtually impossible to install it except in its correct position.

First — install Hearth or Firebox.

Next, attach the Burner Mounting Plate, which has 4 heavy spacer studs, to front of heating element. Next, install the Air Tube. Then, place Oil Burner Chassis on the 4 studs. Tighten the 4 nuts on the Studs, which connect the Oil Burner Chassis to the Air Tube.

The entire Burner Chassis can be removed and replaced at any time without disturbing the Firebox or the Air Tube.

The complete nozzle-line-electrode assembly is easily removed by loosening one screw, and swinging aside the hinged Transformer.

The Motor Pump and Blower of this Burner are a dynamically balanced assembly which assures longer life, less wear, quieter operation.

RATINGS

Unit No.	B.T.U. Input* at Burner	Gallons per Hour	B.T.U. at* Bonnet	Filters No. Size	Approx. Shipping Weight—Lbs.
OH-85-ED	105,000	.75	84,000	1 (20 x 20)	404
OH-85-E	105,000	.75	84,000	1 (20 x 20)	404
OHC-85-ED	105,000	.75	84,000	2 (10 x 20)	402
OHC-85-E	105,000	.75	84,000	2 (10 x 20)	402
OH-101-E	126,000	.90	100,000	1 (20 x 25)	476
OHC-101-E	126,000	.90	100,000	1 (10 x 20) 1 (16 x 20)	468
OH-123-E	154,000	1.10	123,200	1 (20 x 25)	549
OHC-123-E	154,000	1.10	123,200	2 (16 x 20)	560

*Rated according to U. S. Dept. of Commerce Commercial Standard for Warm Air Furnaces, No. CS-195.
Unit Nos. OH-85-ED and OHC-85-ED are equipped with Direct Drive Blowers.

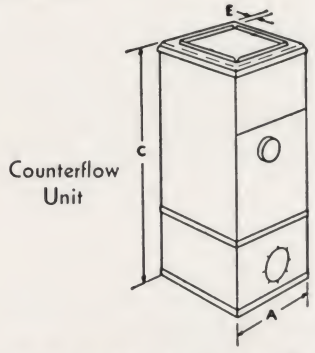
DIMENSIONS

Unit No.	Cabinet Width	Cabinet Depth	Cabinet Height	Warm Air Plenum	Warm Air With Base For Combustible Floor	Return Air Plenum	Return Air With Side Air Intake	"E"	Flue Size Oil	Flue Size Gas	Ht. Flue Opening Oil	Ht. Flue Opening Gas
OH-85-ED	20″	*20″	72″†	18″ x 18″	—	18″ x 18″	17″ x 17″	1″	6″	5″	62½″	71¾″
OH-85-E	20″	*20″	72″†	18″ x 18″	—	18″ x 18″	17″ x 17″	1″	6″	5″	62½″	71¾″
OHC-85-ED	20″	*20″	78″	17″ x 17″	17″ x 17″	18″ x 18″	—	1″	6″	5″	43″	52¼″
OHC-85-E	20″	*20″	78″	17″ x 17″	17″ x 17″	18″ x 18″	—	1″	6″	5″	43″	52¼″
OH-101-E	25″	*25″	71½″	22″ x 22″	—	20″ x 22″	18″ x 24″	2″	6″	6″	62½″	72¾″
OHC-101-E	25″	*25″	73¼″	22″ x 22″	22″ x 22″	22″ x 22″	—	2″	6″	6″	42½″	52¾″
OH-123-E	26″	*26″	74″	24″ x 24″	—	20″ x 22″	18″ x 24″	2″	7″	6″	61½″	72½″
OHC-123-E	26″	*26″	78″	22″ x 22″	23″ x 23″	24″ x 24″	—	2″	7″	6″	40½″	51½″

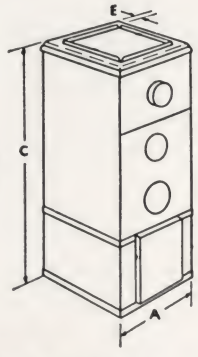
*On all units add approx. 12½″ for projection of Oil Burner.
†Deduct 2″ in height when Side Air Intake is used.

RATINGS WHEN EQUIPPED FOR GAS

Oil Unit No.	Gas Unit No.	B.T.U. Input
OH-85-ED	H-100-ED	100,000
OH-85-E	H-100-E	100,000
OHC-85-ED	HC-100-ED	100,000
OHC-85-E	HC-100-E	100,000
OH-101-E	H-115-E	115,000
OHC-101-E	HC-115-E	115,000
OH-123-E	H-140-E	140,000
OHC-123-E	HC-140-E	140,000



Counterflow Unit



Utility Unit

MAXIMUM AIR DELIVERIES WITH STANDARD AND★ OPTIONAL BLOWER MOTORS

UNIT NO.	Blower No.	Motor H.P.	Speed Control or Drive Combination	Standard or Optional	AIR TEMPERATURE RISE: °F. with EXTERNAL STATIC PRESSURE in INCHES of WATER .15	.20	.30	.40	.50	CUBIC FEET per MINUTE at EXTERNAL STATIC PRESSURE in INCHES of WATER .15	.20	.30	.40	.50
OH-85-ED	9-9D	1/6	17002	Std.	112	105	116	—	—	765	733	666	—	—
			Removed		94	99	107	120	—	816	780	717	137	—
OH-85-E	9-9	1/6	3¼ x 6	Std.	86	93	107	—	—	894	824	718	—	—
		1/4	3¼ x 5	Opt.	73	76	83	94	104	1048	1020	927	823	740
OH-101-E	10-10	1/4	3¼ x 7	Std.	—	61	67	76	98	—	1380	1260	1110	860
		1/3	3¼ x 6	Opt.	—	—	58	61	68	—	—	1455	1380	1240
OH-123-E	10-10	1/4	3¼ x 7	Std.	—	93	102	113	—	—	1220	1105	—	—
		1/3	3¼ x 6	Opt.	—	79	83	93	99	—	1430	1355	1220	1140
OHC-85-ED	9-9D	1/6	17001	Std.	98	100	107	117	—	788	771	718	660	—
			—		89	93	102	112	—	862	824	755	690	—
OHC-85-E	9-9	1/6	3¼ x 6	Std.	84	90	99	125	—	917	853	780	616	—
		1/4	3¼ x 5	Opt.	68	71	73	82	92	1130	1079	1049	940	834
OHC-101-E	10-10	1/4	3¼ x 7	Std.	—	58	65	86	106	—	1450	1300	980	795
		1/3	3¼ x 6	Opt.	—	—	—	58	69	—	—	—	1450	1220
OHC-123-E	10-10	1/4	3¼ x 7	Std.	—	81	89	104	—	—	1390	1270	1090	—
		1/3	3¼ x 6	Opt.	—	69	75	80	88	—	1630	1510	1410	1280

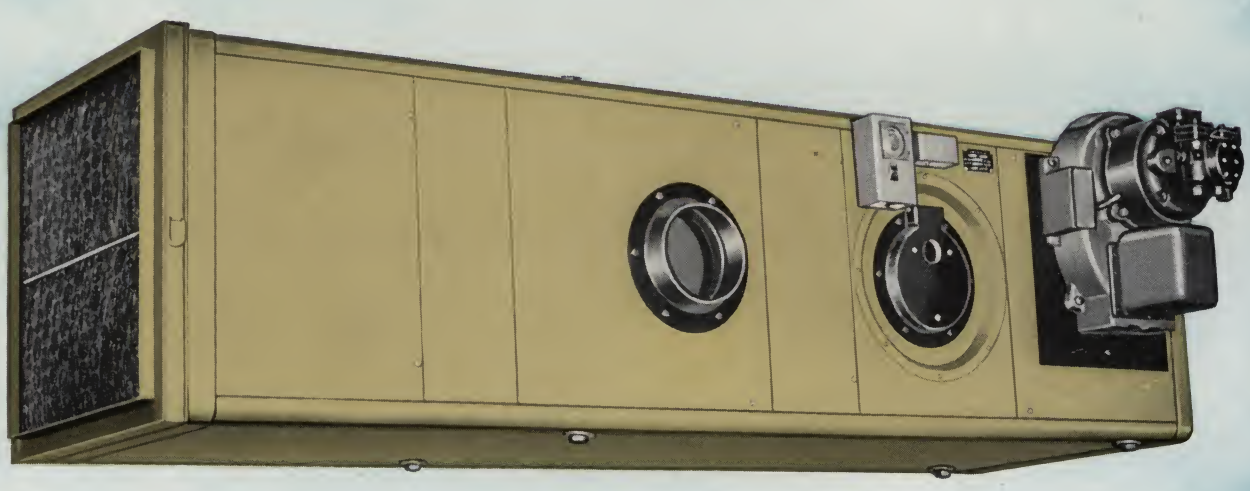
★ Optional at additional cost. Blower Motor to produce additional Air Deliveries as indicated.

Printed in U.S.A. 2584

Southaire

OIL FIRED

HORIZONTAL UNIT



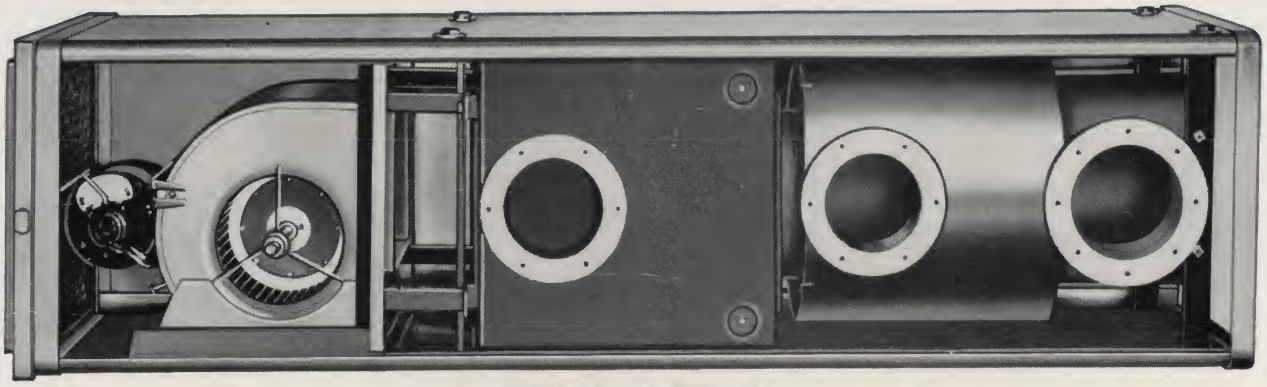
FOR ATTIC . . . for CRAWL SPACE
for ALL TYPES of SUSPENDED INSTALLATIONS

This horizontal oil fired unit is designed for installation where no floor space is available for the heating plant. This versatile furnace may be suspended in a crawl space, or from the ceiling in a commercial or basement installation. It may also be installed in an attic, or it may be placed on a floor.

The efficiency of this unit is enhanced by "straight through" air delivery, and the counterflow principle of heat transfer. Large primary and secondary heat exchange surfaces, and adequate combustion space insure efficient and quiet operation — without sacrificing compactness or accessibility.

Oil Fired Horizontal Units are shipped factory assembled—ready for installation of the plate mounted, gun type oil burner.

IT'S NEW...UNIQUE...BETTER



INSIDE VIEW OF FURNACE

HEATING ELEMENT

The large capacity heat exchanger, constructed of heavy gauge steel with seams electrically welded, extracts all the heat possible from the products of combustion before they enter the flue.

Radiator has readily accessible clean-out ports for quick and easy inspection, or for cleaning if necessary.

An outstanding, distinctive feature is the ease with which the complete heating element can be removed for inspection or cleaning without disturbing the plenum chamber or duct work.

OIL BURNER

The gun type oil burner is designed to provide many years of quiet, economical operation.

It is virtually impossible to install the oil burner incorrectly because four studs, welded to the burner mounting plate, insure correct alignment and spacing.

The entire Burner Chassis can be removed without disturbing the Firebox or the Air Tube.

The complete nozzle-electrode assembly is easily removed by loosening one screw, and swinging aside the hinged Transformer, located at the rear of burner housing.

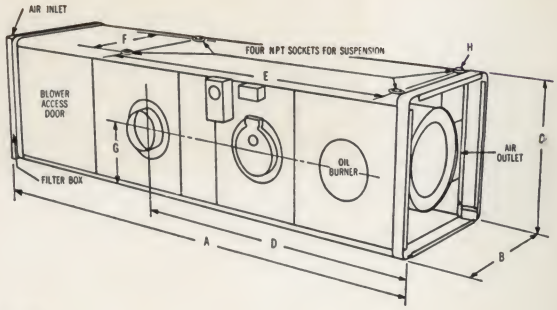
The unique method of assembling the pump, motor, and blower permits easy removal of any of these parts for service, and also reduces vibration because the whole assembly is dynamically balanced, and proper shaft alignment is assured.

BLOWER • MOTOR • FILTER

The large capacity, quiet-operating blower provides clean, filtered air. Both the blower and motor are rubber mounted to prevent operating noises. Blower is equipped with self-lubricating, sealed sleeve bearings. Air filter is standard equipment.

DIMENSIONS

UNIT No.	A	B	C	D	E	F	G	H N.P.T.	RETURN AIR PLENUM	WARM AIR PLENUM
OY-85-ED	77½"	20"	20"	44½"	46½"	16"	10"	½"	18"x18"	18"x18"
OY-85-E	77½"	20"	20"	44½"	46½"	16"	10"	½"	18"x18"	18"x18"
OY-101-E	77"	25"	25"	45"	47"	18"	12½"	½"	22"x22"	21"x21"
OY-123-E	82½"	26"	26"	42"	48¼"	21"	13"	½"	24"x24"	24"x24"
OY-224-E	101½"	32"	32"	50½"	62"	25¾"	16"	¾"	28"x28"	28"x28"



Unit No. OY-85-ED equipped with Direct Drive Blower.
Rated according to U.S. Dept. of Commerce Commercial Standard for Warm Air Furnaces - No. CS-195.

RATINGS

Unit No.	B.T.U. Input at Burner	Gallons per Hour	B.T.U. at Bonnet	No. Filters Size	Flue Size	Approx. Shipping Wt. with Burner
OY-85-ED	105,000	.75	84,000	1-20x20	6"	421
OY-85-E	105,000	.75	84,000	1-20x20	6"	421
OY-101-E	126,000	.90	100,800	1-20x25	6"	470
OY-123-E	154,000	1.1	123,200	1-20x25	7"	588
OY-224-E	280,000	2.0	224,000	2-20x25	9"	899

MAXIMUM AIR DELIVERIES WITH STANDARD AND ★ OPTIONAL BLOWER MOTORS

UNIT NO.	Blower No.	Motor H.P.	Standard or Optional	Speed Control No. or Drive Combination	Belt Length	Blower RPM	AIR TEMPERATURE RISE: °F. with EXTERNAL STATIC PRESSURE in INCHES of WATER .15	.20	.30	.40	.50	CUBIC FEET per MINUTE at EXTERNAL STATIC PRESSURE in INCHES of WATER .15	.20	.30	.40	.50
QY-85-ED	DD9-9	1/6	Std.	2133	—	890	88	93	98	106	—	875	828	785	726	—
				Removed	—	1025	71	75	81	89	106	1085	1025	951	865	726
OY-85-E	A-9	1/6	Std.	3¼ x 6	38"	920	62	68	76	88	111	1243	1132	1014	875	693
		1/4	Opt.	3¼ x 5	36"	1040	—	57	63	67	75	—	1350	1220	1150	1026
OY-101-E	A-10	1/4	Std.	3¼ x 7	40"	800	—	78	88	104	124	—	1175	1040	880	740
		1/3	Opt.	3¼ x 6	39"	910	—	—	70	78	86	—	—	1310	1175	1065
OY-123-E	A-10	1/4	Std.	3¼ x 7	41"	810	—	75	86	98	117	—	1510	1310	1150	965
		1/3	Opt.	3¼ x 6	39"	915	—	65	71	76	85	—	1740	1590	1490	1330
OY-224-E	A-12	1/2	Std.	4 x 9	49"	—	2240 Nominal C.F.M. at 0.20" of Water									

★ Optional at Additional Cost—Blower Motor to produce additional Air Deliveries, as indicated.

Printed in U.S.A. 11574

Southaire OIL FIRED GRAVITY FURNACE

AUTOMATIC heat is really inexpensive and completely satisfactory with a Gravity Furnace installation.

Installation costs and operating costs of a gravity furnace are surprisingly low and gravity heating is clean heating.

A Southaire Oil Fired Gravity Furnace is a complete, compact, efficiently operating furnace that is built to give years of satisfactory, trouble-free heating.

A sturdy, baked enamel cabinet houses the heavy gauge, durable, steel heating element, welded leak-proof and gas-tight. Ample heating surface and heat absorbing radiation shields assure the utmost in heating efficiency. Heat loss through the cabinet reduced to a minimum.

Southaire Oil Fired Gravity Furnaces can be converted for gas firing anytime by simply changing burners and the cost is surprisingly low.

Gravity Furnace equipped with Gun Type Oil Burner.

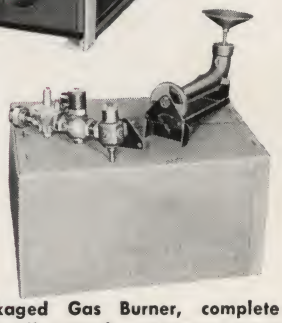
The same furnace can be equipped with Gas Burner which is Approved by A. G. A. for manufactured, Natural, Mixed and Liquefied Petroleum Gas.

Southaire Oil Fired Gravity Furnace

Easily—Quickly Equipped for Gas Anytime

Packaged Oil Burner, complete with all controls, pre-cast fire-box, necessary parts and fittings for a complete oil-fired installation.

Assembled Furnace, crated before cardboard protective wrapping is inserted inside of crate.



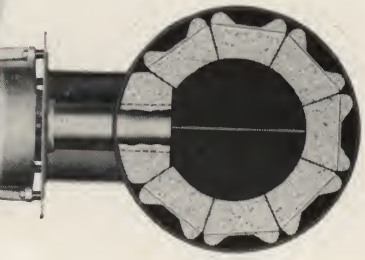
Packaged Gas Burner, complete with all controls, necessary parts and fittings for a complete gas-fired installation.

Conversion kits for gas are listed by the American Gas Association for approved burning of Natural, Manufactured, Mixed or Liquid Petroleum gas.

Plate Mounted Burner Quick-Easy to Install

Placing Oil Burner chassis on mounting plate.

Cut-away view of combustion chamber showing Oil Burner in place.



Installation of this burner is unbelievably simple. It is virtually impossible to install it except in its correct position.

First — install Hearth or Firebox.

Next, attach the Burner Mounting Plate, which has 4 heavy spacer studs, to front of heating element. Next, install the Air Tube. Then, place Oil Burner Chassis on the 4 Studs, tighten the 4 nuts on the Studs, which connect the Oil Burner Chassis to the Air Tube.

The entire Burner Chassis can be removed and replaced at any time without disturbing the Firebox or the Air Tube.

The complete nozzle-line-electrode assembly is easily removed by loosening one screw, and swinging aside the hinged Transformer.

The Motor, Pump and Fan of this Burner are a dynamically balanced unit. Longer life, less wear, quieter operation result.

SERIES "OG" OIL GRAVITY FURNACE—RATINGS

Unit No.	Input at Burner	B.T.U. at Bonnet	B.T.U. at Register	Shipping Wt. Lbs.	When Equipped for Gas Input	
OG-72	112,000 Btu (0.80 gal.)	84,000	71,400	455	G-110	110,000 Btu
OG-89	154,000 Btu (1.10 gal.)	115,500	98,200	490	G-135	135,000 Btu

DIMENSIONS

Oil Unit No.	Gas Unit No.	Cabinet Width	Cabinet Depth	Cabinet Height	Discharge Opening	Intake Opening	Flue Pipe Oil	Flue Pipe Gas	Ht. Flue Opening Oil	Ht. Flue Opening Gas
OG-72	G-110	25″	*36″	55″	23″x34″	(cut in field)	6″	6″	46½″	56¾″
OG-89	G-135	28″	*44″	56″	26″x42″	(cut in field)	7″	6″	46″	57″

*On all units add approx. 12½″ for projection of Oil Burner.
Rated according to U.S. Dept. of Commerce Commercial Standard for Warm Air Furnaces—No. CS-195

Printed in U.S.A. 11574

A-195

Forget your heating plant . . . enjoy your home.

Convert

YOUR HEATING WORRIES INTO CAREFREE COMFORT WITH A

Home or away, let your furnace take care of itself. Decide now to enjoy effortless automatic heating.

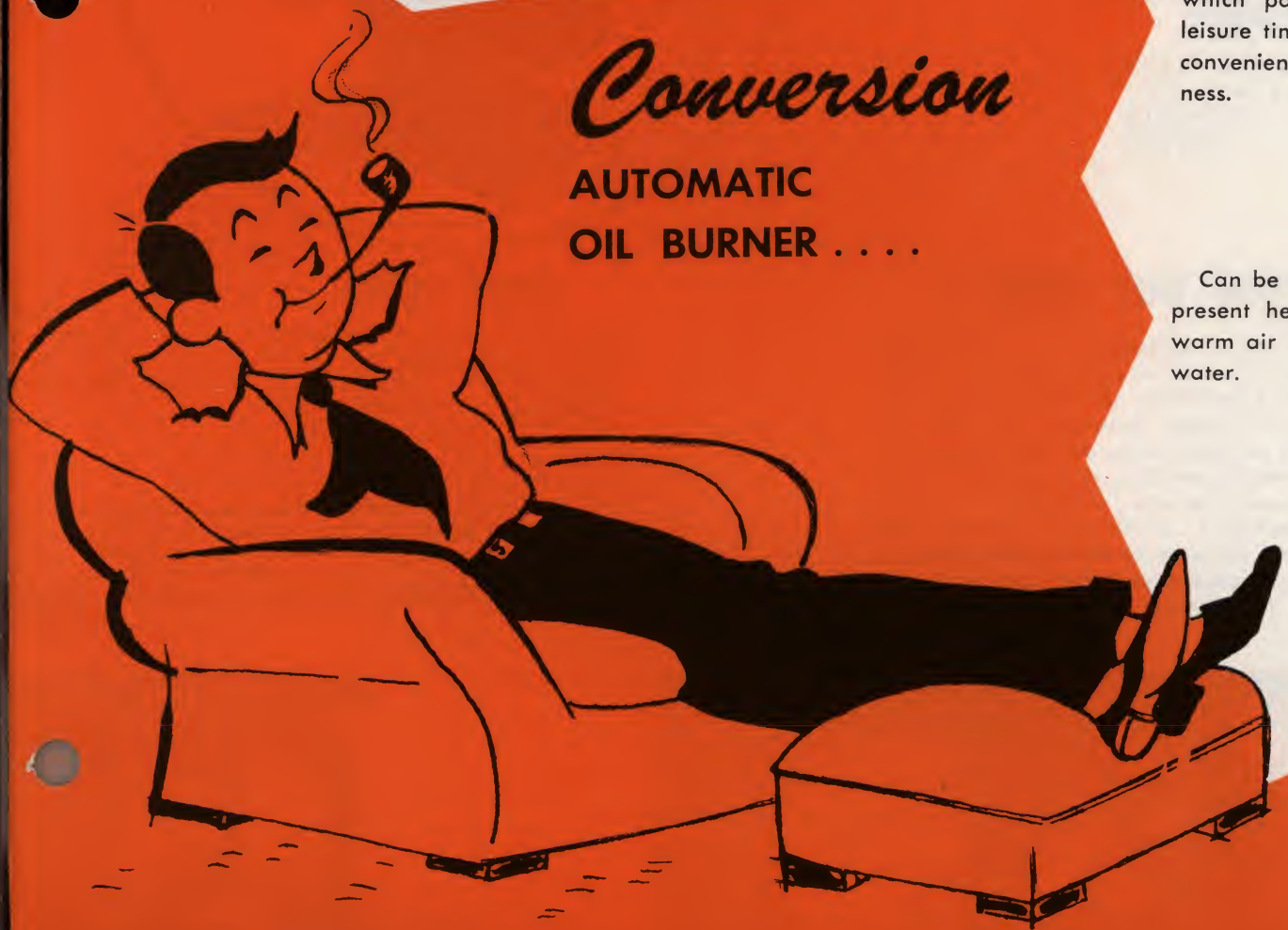
Southaire

A lifetime investment which pays dividends in leisure time, labor saving, convenience and cleanliness.

Conversion

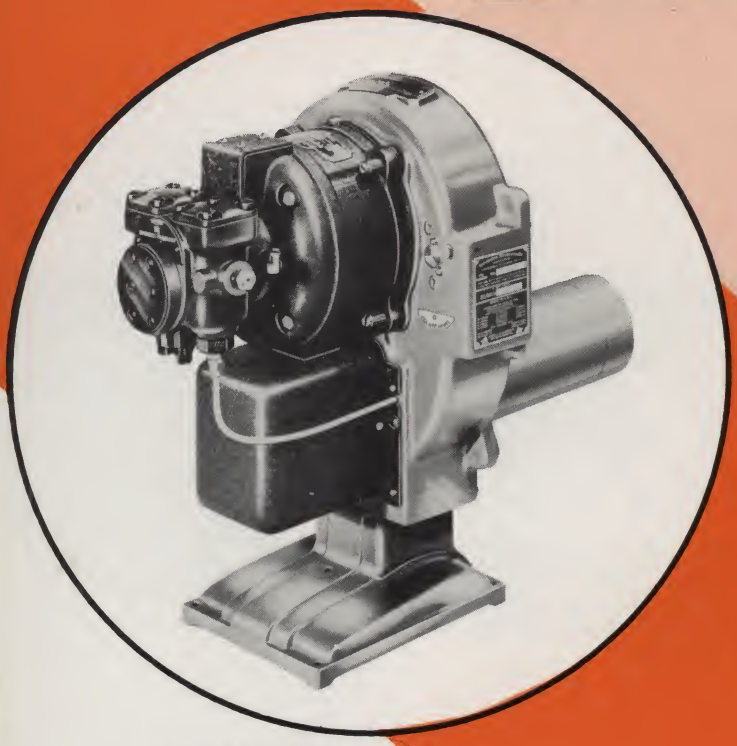
AUTOMATIC OIL BURNER . . . .

Can be installed in your present heating system — warm air . . steam . . hot water.



Southaire

AUTOMATIC OIL BURNERS

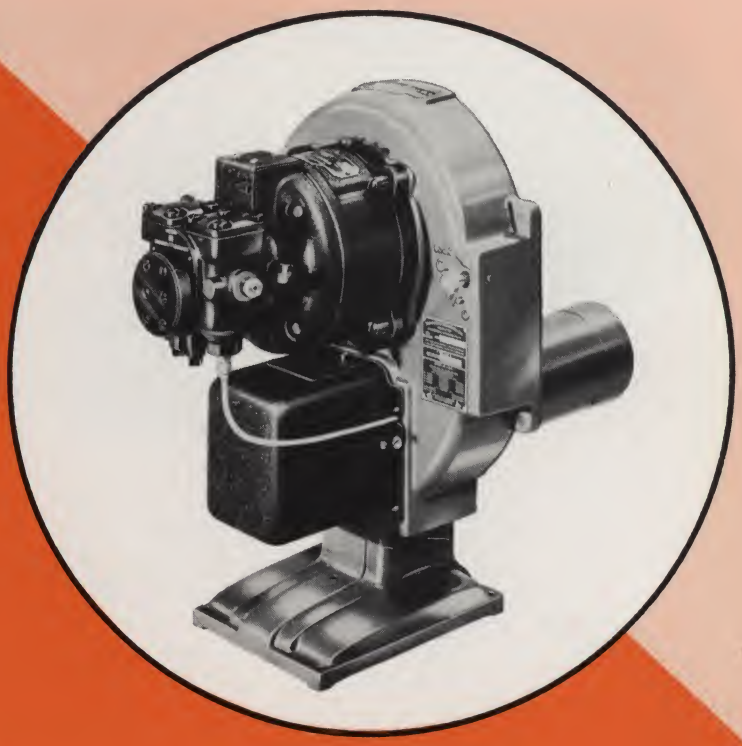


SERIES "OC"

Limits of Oil Rate — .75 to 2.5 G.P.H.

Maximum Connected Load:

WARM AIR	200,000 B.T.U.
STEAM	900 Sq. Ft.
HOT WATER	1450 Sq. Ft.



SERIES "ON"

Limits of Oil Rate—1.35 to 3.50 G.P.H.

Maximum Connected Load:

WARM AIR	350,000 B.T.U.
STEAM	1600 Sq. Ft.
HOT WATER	2500 Sq. Ft.

All of
Burners
common feature
and basic ope

HOW THEY WORK

Metered air for combustion is acceleratively rotated as it is moved into the combustion zone. Immediately surrounding the oil atomizing nozzle there is a violent vortex of air which entrains finite particles of liquid fuel as they are projected into the combustion zone. This assures a complete and thorough merging of the combustion elements . . . oil and oxygen of the air . . . with full and complete recognition of the "3 T's of combustion" . . Time - Temperature - Turbulence.

These burners are made and sold under one or mor

UNITED STATES: D-115640 D-115680 D-1
2287462 2300903 23
2506192 2599153 D-1

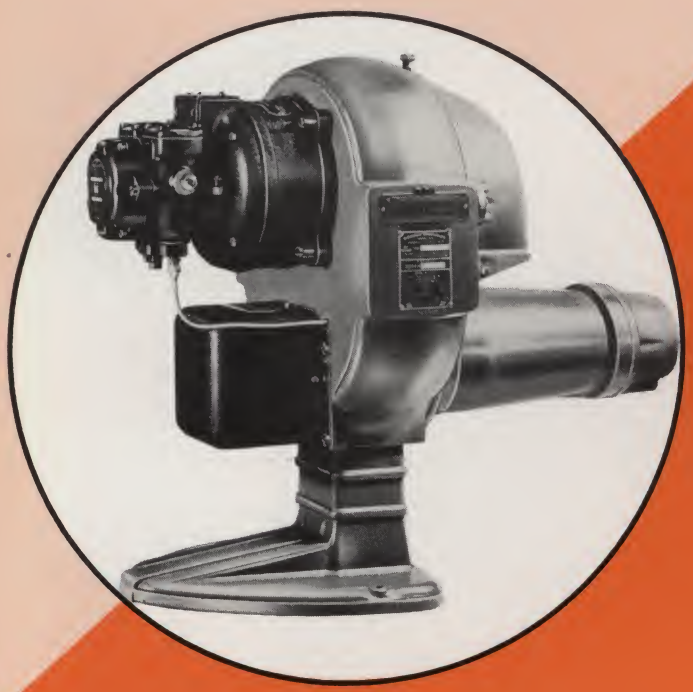
CANADA: 1942—405069 1943—415119 1944—4210

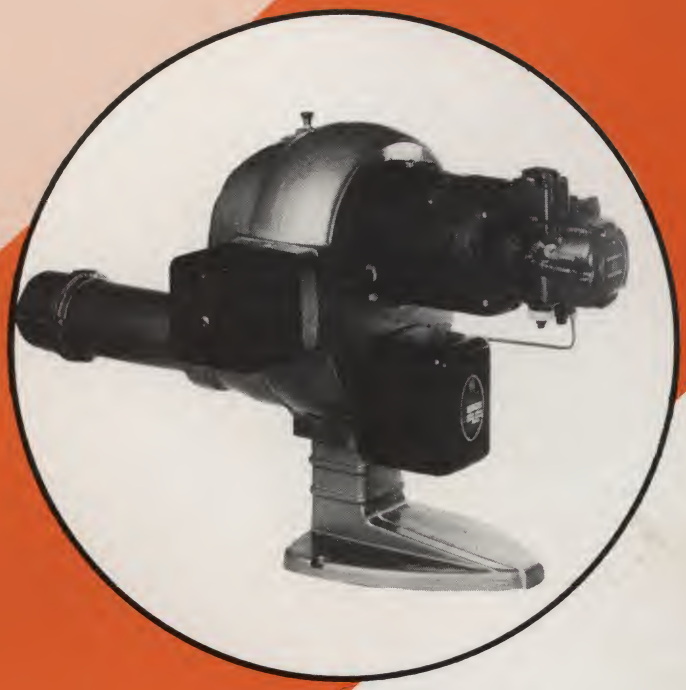
— Other Patents

A VORTEX OF AIR

A strip of cloth entrained by the air stream illustrates the cyclonic action.

Not an ordinary Oil Burner . . . but one which is basically different. Its unique construction is evidenced by 22 U.S. and Canadian patents, with others pending. A few of its outstanding and proven features are illustrated.





SERIES "L"

Limits of Oil Rate — 4.0 to 13 G.P.H.

Maximum Connected Load:

WARM AIR	1,300,000 B.T.U.
STEAM	5800 Sq. Ft.
HOT WATER	9300 Sq. Ft.

SERIES "M"

Limits of Oil Rate — 2.5 to 6.0 G.P.H.

Maximum Connected Load:

WARM AIR	600,000 B.T.U.
STEAM	2700 Sq. Ft.
HOT WATER	4300 Sq. Ft.

these
incorporate
res of design
erating principle.

e of the following patents:—

115682	D-120478	D-125303	D-115681
310274	2330190	2330191	2287595
152668	D-163671		
069	1946—435670	1952—487003	1952—487510

s Pending —

Ample Time - Temperature and Turbulence in the combustion process assures clean, quiet, uniform combustion with a minimum of excess air . . . a controlled flame burning in suspension away from vital burner parts. The flame radiates heat to all surfaces of the furnace. Then the superhot gases of combustion are forced to scrub every inch of heating surface, to transfer their useful heat before passing into the chimney. Heat is transferred by Radiation, Conduction and Convection. Relatively high efficiencies throughout each and every running period, long or short, account for low annual fuel costs.

SMOOTH IGNITION

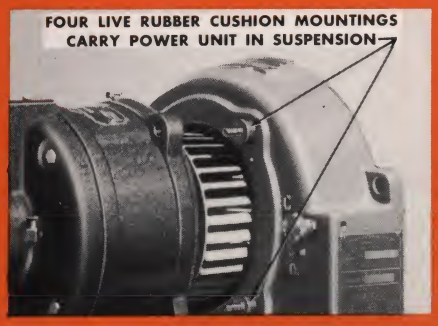
Note that the arc for ignition is blown . . **out** and **down** . . into the central portion of the vortex.

A SUSPENDED FLAME

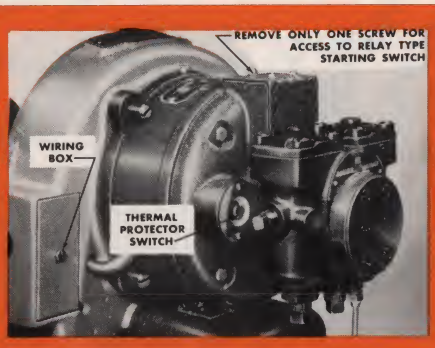
Peak combustion efficiency attained immediately.

SALIENT FEATURES OF SUPERIORITY

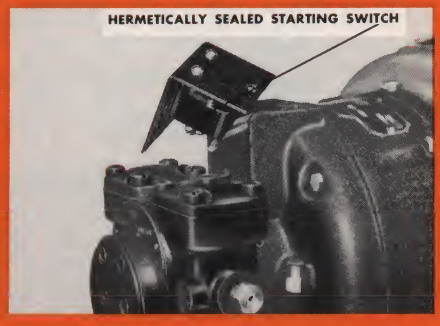
Compact Symmetrical Designs . . . Cushioned-Power . . . Minimum Adjustments
Complete accessibility for service from back of burner



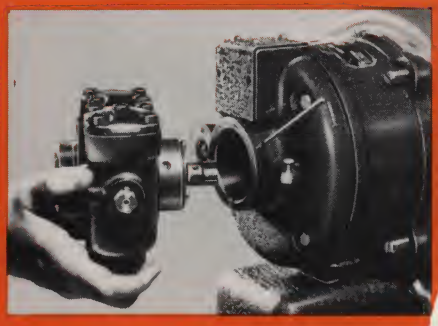
Cushioned-Power Unit



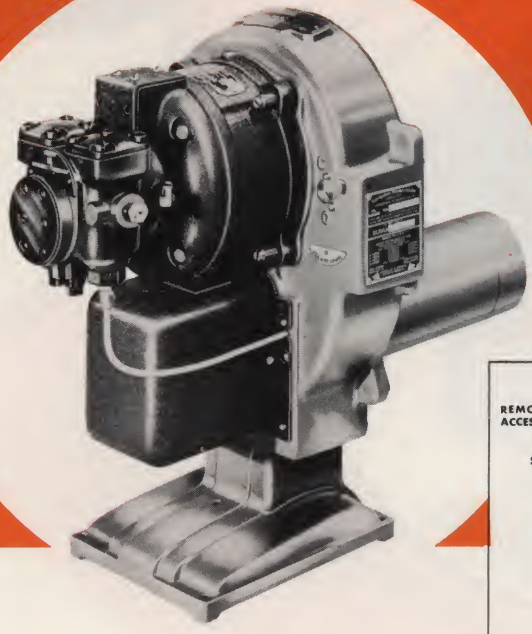
The Motor Starting Switch is accessible without removal of the fuel unit or motor.



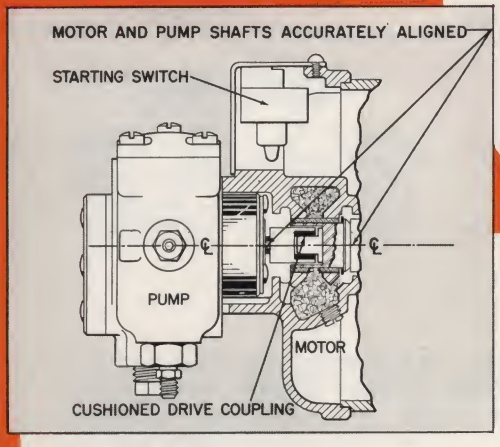
Sealed Starting Switch at top of motor replaces Centrifugal Type . . . Simplifies Service.



Fuel Unit easily removable by loosening 2 set-screws.

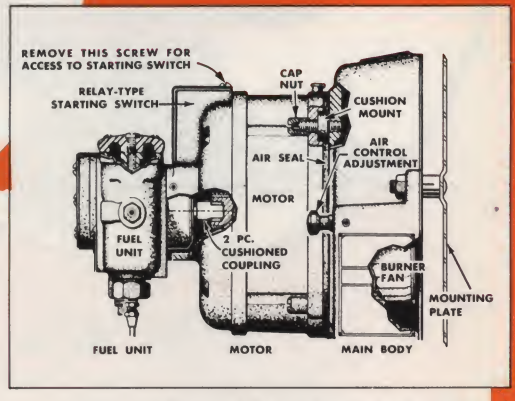


Convenient Access to Nozzle—Electrode Assembly . . . No ignition cable.



Accurate Shaft Alignment . . . Cushioned Drive Coupling . . . Dynamic Balance of Rotating Parts.

ALL VITAL PARTS ACCESSIBLE FROM BACK OF BURNER



Compact Symmetrical Assembly of Components.

Ask your dealer for further information. He will examine your heating plant at no obligation. If it is in good condition, he will explain how easily and quickly it can be converted to a completely Automatic System at minimum cost.

Approved by the Underwriters' Laboratories, the New York City Board of Standards and Appeals, Commonwealth of Massachusetts, State of Connecticut, CSA in Canada, etc.

Printed in U.S.A.

E. E. SOUTHER IRON CO.
1952 Kienlen Avenue St. Louis 20, Missouri

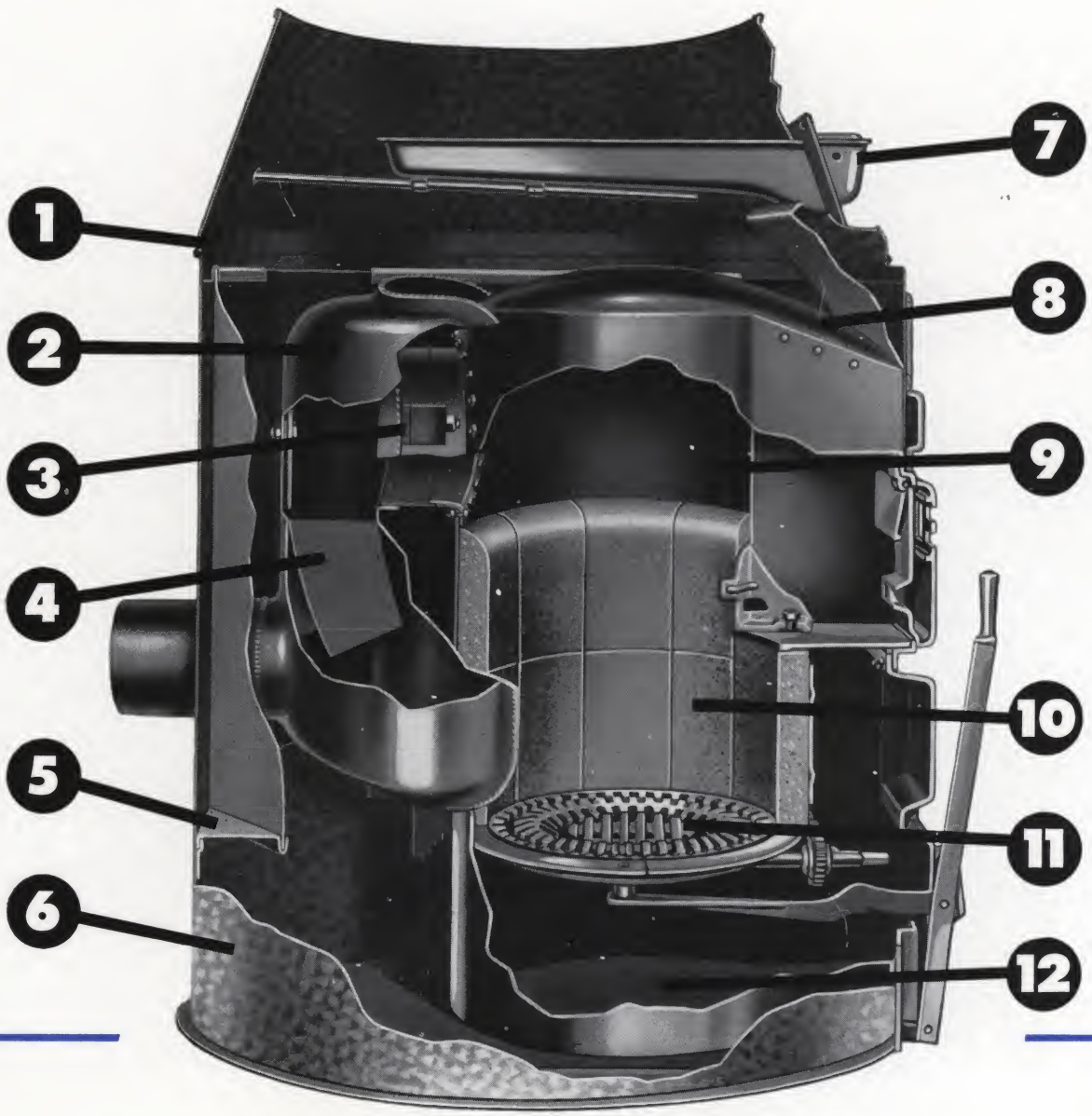
No. 270
Supersedes
No. 256

Southaire
COAL GRAVITY FURNACE

E. E. SOUTHER IRON CO.

1952 Kienlen Ave. St. Louis 20, Missouri

EFFICIENT • • • DURABLE • • •



CONSTRUCTION FEATURES

1 **CASING TOP BAND.** Provides extra, overall casing rigidity. Aids in assembly.

2 **LARGE CAPACITY—DIE FORMED, RADIATOR.** This new deep drawn radiator is now made from two pieces of No. 12-gauge steel, securely welded. Radiator is equipped with V Baffle and protecting Plate opposite connecting collar.

3 **DRUM AND RADIATOR CONNECTION.** A tongue and groove joint with asbestos packing provides a permanent leak-proof connection.

4 **V-SHAPE RADIATOR BAFFLE.** Deflects the hot gases so that all parts of the radiator become effective radiating surfaces.

5 **INNER LINER SUPPORTS.** Heavy steel brackets provide support and adequate insulating space between inner liner and outer casing.

6 **CASING.** The round, heavy gauge galvanized casing with inner liner is quickly assembled into a rigid, compact, easy-to-keep-clean unit.

7 **OPTIONAL HUMIDIFIER PAN.** Heavy, one piece construction, 18-ga. steel. Long lived porcelain enamel coating. Holds 1⅝ gallons of water. Is inexpensively converted into automatic humidifier. An accessory.

8 **DRUM HEAD.** Head and pouch are formed in one piece from heavy gauge steel, on a giant press.

9 **COMBUSTION CHAMBER.** Heavy durable drum body is blanked and fabricated from one piece of steel on a giant press—automatically welded and riveted for strength and tightness.

10 **FIRE POT.** Full height fire pot provides large fuel capacity. New adjustable brick retaining band provides an adjustment that assures proper fit of fire brick.

11 **DUPLEX ROLLER-BEARING GRATES.** Heavy cast iron with rotating outer ring and center dump bars. Easily removed and replaced if necessary.

12 **ASH PIT.** New heavy gauge steel base is formed in one piece with base securely welded to drum. Ash pit is dust and gas tight.

DEPENDABLE • • • DISTINCTIVE

HEATING ELEMENT

The die-formed, steel combustion chamber with long fire-travel, is outstanding in steel furnace design. This design and construction incorporate all the requirements necessary to provide the maximum in heating economy and long-lived operation.

Heavy gauge steel successfully provides the necessary all-over strength for expansion and contraction. The new submerged, automatic welding method is employed in bonding the one-piece drum head to the body. This new type of welding assures a stronger, more uniform, deeper penetrating, non-porous, leak-proof welded construction that prevents gases from filtering into the circulating air stream.

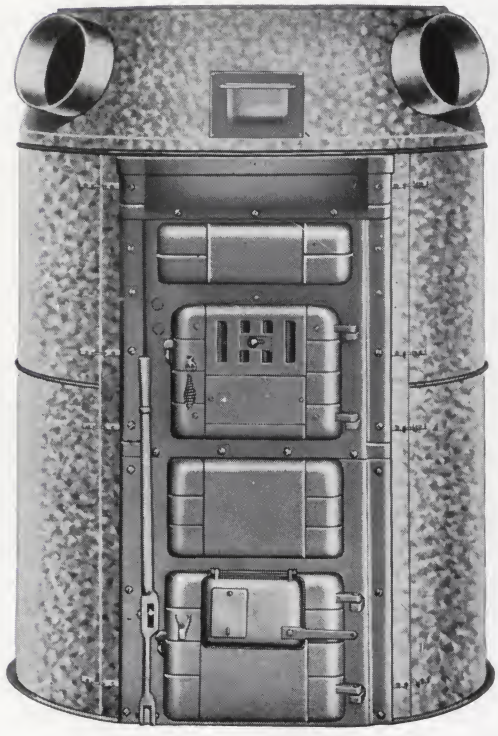
Provision is made for the installation of hot water coils, if desired.

EXTRA CAPACITY RADIATOR

The large, two-piece, die-formed steel radiator with unusually large heating surfaces, insures long years of satisfactory, economical heating.

Securely anchored inside the radiator is a V-shaped baffle which forces the hot gases to all surfaces of the radiator for the maximum of heat extraction from the hot gases.

A 3/16" steel Disc, mounted opposite the opening through which flames and hot gases from the combustion chamber enter the radiator, intercepts these flames and prevents them from impinging on the radiator. The use of a Spacer provides an air space between Disc and Radiator and prevents direct conduction of heat between these parts.



ROUND CASING

The round cased, steel furnace, illustrated above, embodies all of the new, advanced engineering and construction features.

CAPACITIES AND DIMENSIONS

FURNACE NUMBER	620	622	624	627
Diameter Drum—Inside	20″	22″	24″	27″
Grate Area—Sq. Ft.	1.53	1.91	2.35	3.07
Heating Surface—Sq. Ft.	39.87	42.13	52.73	56.35
*B.T.U. Cap. per Hr. at Reg. (Soft Coal) Oil and Stoker—Series 600 and 700	68,276	75,202	94,123	100,585
B.T.U. Cap. per Hr. at Reg. (Hard Coal or Coke) Series 600 and 700	51,114	63,809	78,509	100,585
Height of Radiator	35″	35″	36″	36″
Depth of Radiator	5½″	5½″	7″	7″
Height of Firepot	14″	14″	14″	14″
Size of Feed Door Opening—Height by Width	10½″x14″	10½″x14″	10½″x14″	10½″x14″
Size of Ash Pit Door Opening—Height by Width	13″x15¼″	13″x15¼″	13″x15½″	13″x15¼″
Diameter of Smoke Collar	8″	8″	9″	9″
Approx. Distance from Floor to Center of Smoke Outlet	23″	23″	23″	23″
Diameter of Casing—Series 600	40″	42″	46″	49″
Height of Casing and Hood—Series 600	66″	66″	66″	66″
Approx. Shipping Weight, Lbs., Furnace Only	695	750	845	920
Approx. Shipping Weight, Lbs., with Casing and Hood, Series 600	745	805	900	980

*Ratings are in accordance with The National Warm Air Heating and Air Conditioning Association formula effective January 1, 1945.

To convert square inch requirements into B.T.U. requirements at register, use the following formulae: Multiply square inch requirements of first floor by 111. Multiply square inch requirements of second floor by 167. Add the totals.

Standard Equipment—Check Damper, Poker, Draft Regulator, Chain and Pulleys.

Printed in U. S. A. 2594

THE

Southaire

FAN

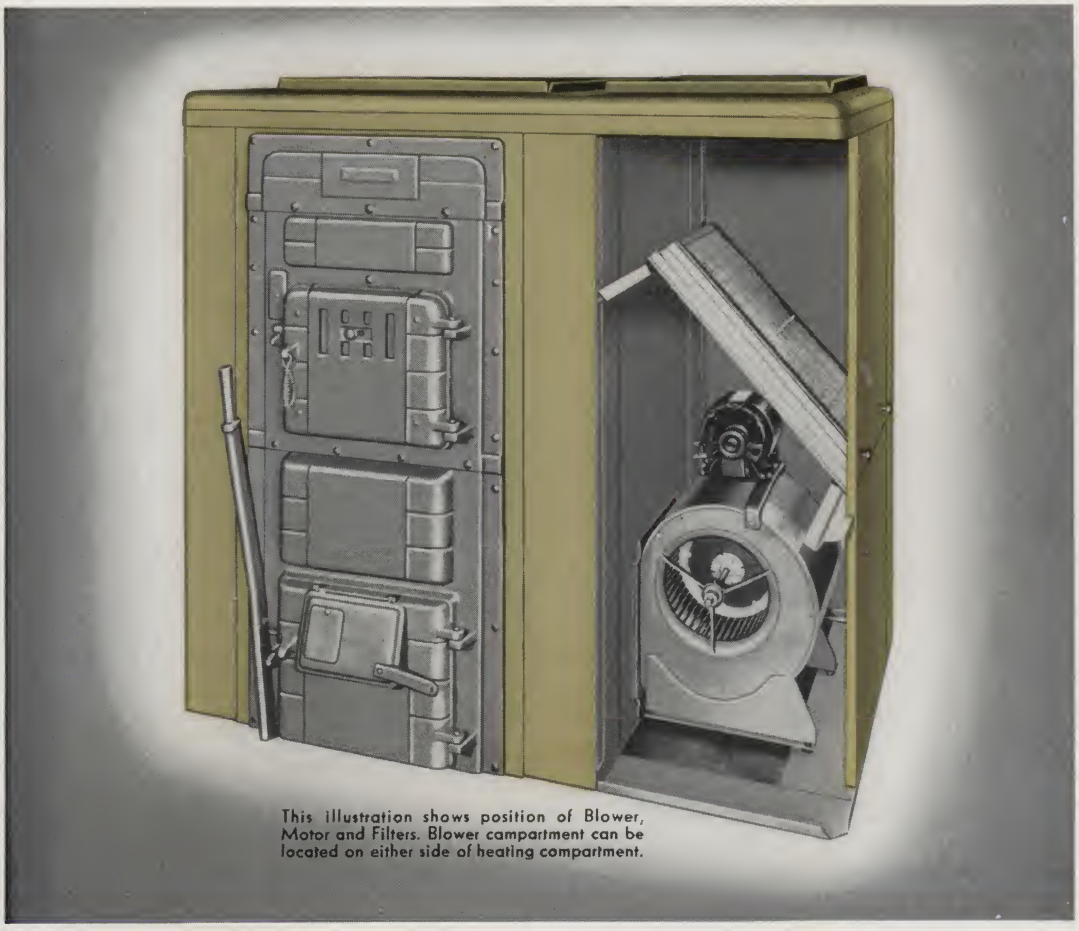
IN

ALL
FUELS
AIR
CONDITIONING
UNIT

E. E. SOUTHER IRON CO.

1952 Kienlen Ave. St. Louis 20, Missouri

Southaire 3 in 1



This illustration shows position of Blower, Motor and Filters. Blower compartment can be located on either side of heating compartment.

Engineered for

1. **COAL**
   Hand Fired
   Stoker Fired
2. **EASILY CONVERTED** *and well adapted for* **OIL**
3. *and* **GAS**

MODERN - ATTRACTIVE - RUGGED - EFFICIENT

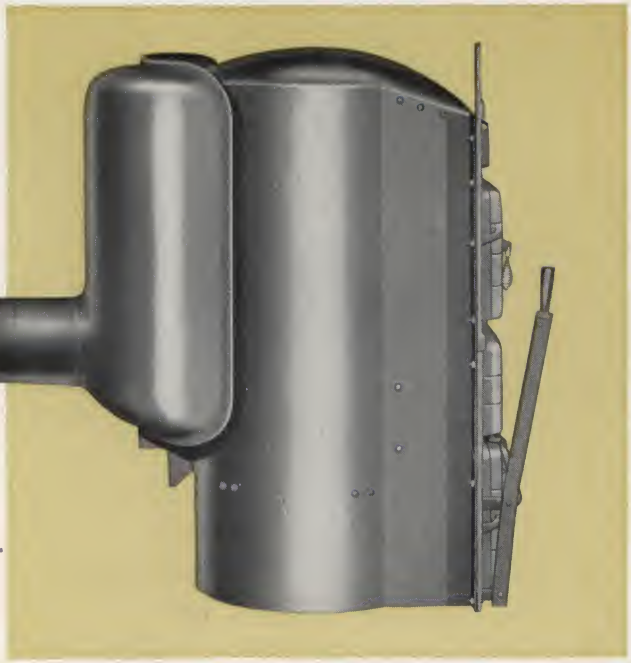
This Modern All Fuels Air Conditioning Unit is equipped with an entirely new casing! This entirely new casing is made of substantially heavier gauge steel and is equipped with a one-piece top. It is sturdier, more rigid, and can be assembled easily and quickly.

Finished in glossy baked enamel, with the blower compartment the same height as the heating compartment, this modern new unit supplies the demand for a coal fired unit that equals the attractive appearance of units which are designed for firing with gas or oil.

The blower compartment of this excellent coal furnace can be installed on either the right or left side of the heating compartment.

Because of its gas-tight, welded steel construction, large area of heating surfaces and long fire travel, this improved coal unit is very well adapted for the installation of an oil or gas conversion burner, or a stoker.

All Fuels Air Conditioning Unit



THE HEATING ELEMENT WITH LONG FIRE TRAVEL

The "3 in 1" steel combustion chamber is outstanding in steel furnace design. Although designed to burn coal, its unique construction provides all the necessary requirements for the successful conversion to gas, oil or stoker firing. Heavy gauge steel provides the necessary all-over strength for long life under all firing conditions. Automatic, submerged arc welding is employed in bonding the one-piece combustion chamber head to the body assuring stronger, deeper penetrating, non-porous, leak-proof construction that withstands, year in and year out, the strain of expansion and contraction as the heating plant alternately heats and cools.

Automatic, Submerged Arc Welding

"3 in 1" Combustion Chambers are welded on automatic welding machines like the one shown at the right.

These machines form the heating elements into seamless and gas-tight units by means of Automatic, Submerged arc welding. This Submerged process of welding provides a deeper penetrating weld; it is denser—no pores or pinholes; and the metal joined is not burned or damaged. All welds are of the same, uniform quality because they are not dependent on the skill or ability of a human operator.

"3 in 1" heating elements are leak-proof and gas-tight.

RADIATOR WITH LARGE HEATING SURFACE

The large, two-piece, die-formed steel radiator has exceptionally large heating surfaces so necessary for satisfactory, economical heating with coal, gas or oil.

The radiator is equipped with a V-shaped baffle, securely anchored in place, which forces the hot gases to all surfaces of the radiator so that the greatest possible amount of heat can be extracted before the hot gases pass out of the heating element and into the flue.

Another distinctive feature is the heavy plate or disc, which is mounted opposite the opening through which flame or hot gases from the combustion chamber enter the radiator. Any flame or gases strike this extra heavy disc, which is as thick as the combustion chamber walls. This prevents direct flame impingement on the radiator thereby prolonging its years of usefulness.

Southaire 3 in 1

ALL FUELS • AIR CONDITIONING UNIT

BLOWER - FILTER

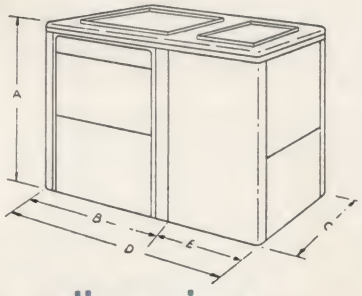
The silently operating blower has ample air handling capacity to deliver the full rated capacity of these units.

Ample filter surface is provided to clean the circulating air and make frequent filter changes unnecessary.

Blower, motor and filters are readily accessible for inspection or servicing.

blower • motor • filter specifications

Furnace Number	BTU Capacity at Register Soft Coal Stoker or Oil	Hard Coal or Coke	Blower Number	C.F.M. Maximum at ⅜" S. P.	Diameter of Blower Wheel	Pulley	Motor H. P.	Number of Filters
A.C. 722-F	95,424	81,045	A-10	1300	10⅝"	8"	1/6	2-16 x 25"
A.C. 724-F	119,433	99,715	A-12	2200	12⅝"	10"	¼	2-20 x 25"
A.C. 727-F	127,633	127,633	A-12	2200	12⅝"	10"	¼	2-20 x 25"



dimensions

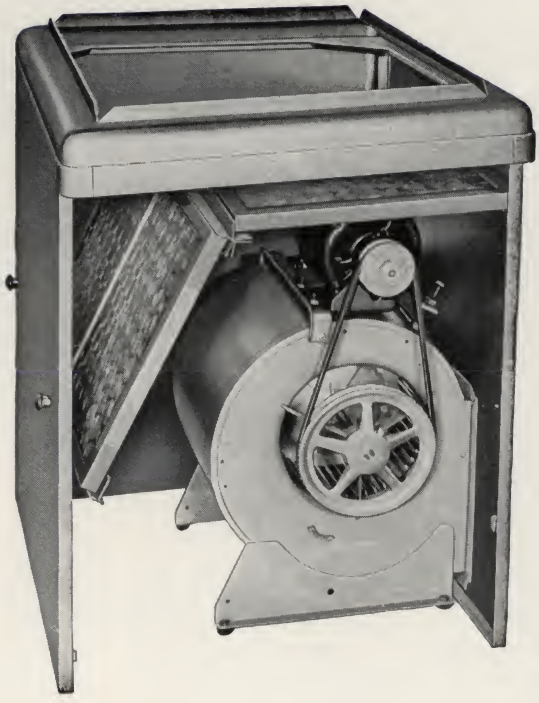
Casing No.	A	B	C	D	E	Warm Air Plenum	Return Plenum	Diameter Smoke Collar	Height to Center of Flue Opening
A.C. 722-F	52¾"	37"	38"	57"	20"	24" x 24"	18" x 24"	8"	23"
A.C. 724-F	52¾"	42"	43"	67"	25"	30" x 30"	20" x 30"	9"	23"
A.C. 727-F	52¾"	44"	45"	69"	25"	30" x 30"	20" x 30"	9"	23"

Printed in U. S. A. 3584

No. 205

Southaire

BLOWER·FILTER UNIT



You have many prospects with gravity furnace installations who want to modernize their heating equipment by adding a blower-filter unit.

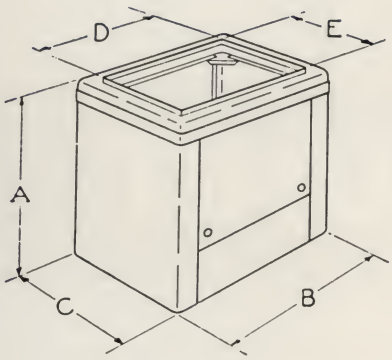
Designed for attachment to either new or old gravity furnaces, the blower-filter unit will provide forced air circulation under positive pressure.

The unit is complete including blower, blower pulley, motor, belt and air filters. The compact steel cabinet is attractively finished in baked enamel. All parts are easily reached for servicing through the access door. Unit may be attached to either round or square cased gravity furnaces.

E. E. SOUTHER IRON CO.

1952 Kienlen Ave. **St. Louis 20, Missouri**

FEATURES OF BLOWER-FILTER UNIT



DIMENSIONS

No.	A	B	C	D	E	Air Discharge Opening
A-10	33″	22″	22″	18″	18″	11⅞″ x 13⅝″
A-12	37″	27″	22″	24″	18″	14″ x 16¼″

SPECIFICATIONS

No.	Diameter of Wheel	C.F.M. Range at ¼″ S.P.	Motor H.P.	Diameter of Pulley	Number of Filters
A-10	10⅝″	700-1300	1/6	8″	2 (16″ x 20″)
A-12	12⅝″	1000-2000	¼	10″	1 (20″ x 25″) 1 (16″ x 25″)

PERFORMANCE DATA

Unit No.	Volume Cu. Ft. Per Min.	Outlet Vel. Ft./Min.	⅛″ S.P.		¼″ S.P.		⅜″ S.P.		½″ S.P.		⅝″ S.P.		¾″ S.P.		1″ S.P.		1¼″ S.P.		1½″ S.P.	
			R.P.M.	H.P.	R.P.M.	H.P.	R.P.M.	H.P.	R.P.M.	H.P.	R.P.M.	H.P.	R.P.M.	H.P.	R.P.M.	H.P.	R.P.M.	H.P.	R.P.M.	H.P.
	600	592	353	.022																
	700	690	363	.025	490	.050														
	800	788	375	.035	495	.060	600	.100												
A-10	900	888	390	.047	505	.075	605	.110	690	.145										
Outlet Area	1000	988	405	.060	515	.085	610	.125	693	.165	773	.185								
1.015 Sq. Ft.	1200	1184	437	.085	540	.110	625	.150	705	.200	780	.230	850	.300						
	1400	1380	472	.115	570	.168	652	.200	727	.250	795	.285	860	.340	980	.450	1090	.580		
	1600	1576	512	.160	605	.222	679	.260	752	.312	820	.370	880	.410	993	.530	1098	.660	1200	.850
	1800	1774	548	.220	637	.280	710	.330	780	.390	842	445	900	.490	1010	.605	1108	.730	1205	.910
	1000	695	288	.035																
	1200	834	302	.050	402	.085														
	1400	972	317	.065	410	.100	490	.140												
	1600	1111	335	.088	422	.128	497	.160	565	.210										
A-12	1800	1250	355	.120	438	.160	508	.200	570	.240	635	.305	688	.355						
Outlet Area	2000	1390	377	.150	455	.202	520	.250	580	.280	640	.340	695	.420						
1.44 Sq. Ft.	2200	1530	400	.190	472	.250	535	.300	592	.340	650	.410	705	.480	802	.610				
	2400	1668	420	.225	492	.305	552	.360	605	.400	660	.460	712	.560	808	.685	895	.85		
	2600	1804	445	.285	512	.360	570	.415	620	.465	672	.530	720	.615	815	.770	900	.925	980	1.05
	2800	1944	469	.345	535	.430	588	.485	637	.535	688	.605	732	.686	822	.833	906	1.02	982	1.115
	3200	2222	519	.490	580	.585	628	.646	675	.720	720	.800	762	.880	845	1.024	922	1.215	995	1.375

CAPACITY RATINGS ARE BASED ON TESTS CONDUCTED ON EACH BLOWER SIZE IN ACCORDANCE WITH STANDARD TEST CODE OF THE A. S. H. & A. E. AND N. A. F. M.

Printed in U. S. A. 3584

DEALERS' NET PRICE LIST

Southaire

YEAR 'ROUND and SUMMER AIR CONDITIONING UNITS

No. 162

Effective May 1, 1959

Prices and Terms are Subject to Change Without Notice

TERMS AND OTHER CONDITIONS

TERMS

Terms—2% cash discount for payment 10th of month following shipment—net end of month following shipment.

Cash discount to be taken from net amount of invoice—no discount allowed on freight.

FREIGHT ALLOWANCES

Prices are f.o.b. factory, subject to the following freight allowances EXCEPT where specifically stated that no freight allowance applies.

Less than Carload Shipments—Actual regular rail rate (not collect and deliver rate) of freight from factory allowed up to but not exceeding 50c per cwt.

Carload Shipments—Actual regular rail rate of freight, including Federal taxes levied on freight charges allowed—except that truck rate, if lower, will be allowed in case of truckload shipments—to all points east of the eastern boundaries of North Dakota, South Dakota, Nebraska, and Kansas, and north of the southern boundaries of Missouri, Kentucky, and Virginia, including all towns on such boundary lines. To points beyond these boundaries, the actual carload freight rate to the boundary line will be allowed.

Federal or other taxes levied on freight charges are not included in the Freight Allowances made on less than Carload or less than Truckload Shipments.

In no event is more than the actual freight charge allowed.

Freight allowance does not apply to shipments of repairs or accessories.

ACCEPTANCE OF ORDERS

All orders are accepted conditioned upon fires, floods, strikes, accidents, and conditions beyond our control.

All orders are accepted on the condition that the price in effect at the time of shipment applies.

CLAIMS

The responsibility of this company ceases upon delivery of goods, in good order to transportation company. If shipment is offered to purchaser by transportation company in bad order, purchaser should require that transportation company's agent make notation of damage or shortage on paid freight bill, thereby enabling purchaser to secure prompt payment of claim. Concealed damage should be reported immediately to transportation company, allowing them to make inspection and necessary notation on freight bill.

TAXES

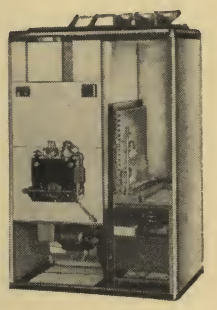
To the prices and terms quoted add any manufacturers' or sales tax payable under any effective statute.

E. E. SOUTHER IRON CO.

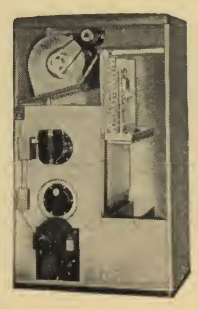
1952 Kienlen Ave. **St. Louis 20, Missouri**

COMBINATION YEAR 'ROUND AIR CONDITIONING UNITS

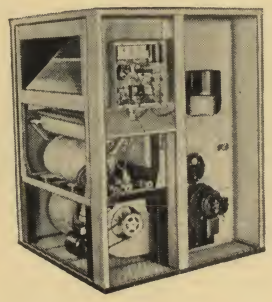
Specify Air Cooled or Water Cooled



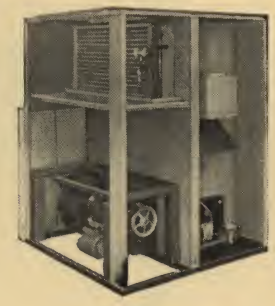
Water Cooled Upflow Gas Fired 2 or 3 H.P. Year'Round Unit. Front Panels are removed to show Complete Refrigerant Circuit and position of Blower. Gas or Oil Fired.



Air Cooled Counterflow Oil Fired 3 H.P. Year 'Round Unit. Front Panels removed to show Cooling Coil installed and position of Blower. Gas or Oil Fired.



Water Cooled 5 H.P. Year 'Round Air Conditioning Unit. Front and side Panels are removed to show complete Refrigerant Circuit and Oil Burner installed. Gas or Oil Fired.



Air Cooled 5 H.P. Year 'Round Air Conditioning Unit. Front and side panels are removed to show Cooling Coil and Gas Burner installed. Gas or Oil Fired.

2, 3 or 5 H.P. Air Cooled Condensing Unit. Constructed of 16 Gauge Zinc Coated Steel. U.L. listed for outdoor installation. Connection to Cooling Coil (shown in Unit at left) is made by means of copper refrigerant tubing.

2 H. P. Year 'Round Units

SHIPPED WITH HEATING ELEMENT, BLOWER AND MOTOR ASSEMBLED IN CASING.

Heating Ratings Gas Fired: 100,000 Btu Input - 80,000 Btu at Bonnet. **Oil Fired:** 105,000 Btu Input (0.75 gal.)- 84,000 Btu at Bonnet.

UNIT NO. Type of Unit Type of Burner	Refrigerant Type No.	—Net Cooling Capacity— with 800 C.F.M. Btu/Hr.	2-A-100 Upflow Gas	2-O-84 Upflow Oil
HEATING ONLY **Complete Furnace Unit** Approximate Shipping Weight—Lbs.			**$235.00★★** 404	**$317.00** 511
AIR COOLED CYR—2 Cooling Coil Approximate Shipping Weight—Lbs.	12		$65.00 58	$65.00 58
CA-21 Air Cooled Condensing Unit★ 230 Volt—1 Phase—60 Cycle Only Approximate Shipping Weight—Lbs.	12		359.00 450	359.00 450
Complete Air Cooled Combination Unit★ 230 Volt—1 Phase—60 Cycle Only Approximate Shipping Weight—Lbs.		21,200†	**659.00** 912	**741.00** 1019
WATER COOLED CW-2 Water Cooled Condensing Circuit★ 230 Volt—1 Phase—60 Cycle Only Approximate Shipping Weight—Lbs.	12		$323.00 288	$323.00 288
Complete Water Cooled Combination Unit★ 230 Volt—1 Phase—60 Cycle Only Approximate Shipping Weight—Lbs.	12	21,400‡	**558.00** 692	**640.00** 799

3 H. P. Year 'Round Units

SHIPPED WITH HEATING ELEMENT, BLOWER AND MOTOR ASSEMBLED IN CASING.

Heating Ratings Gas Fired: 140,000 Btu Input-112,000 Btu at Bonnet. **Oil Fired:** 140,000 Btu Input (1.00 gal.)- 112,000 Btu at Bonnet.

UNIT NO. Type of Unit Type of Burner	Refrigerant Type No.	—Net Cooling Capacity— with 1200 C.F.M. Btu/Hr. Counterflow	Upflow	3-HC-140 Counterflow Gas	3-OHC-112 Counterflow Oil	3-A-140 Upflow Gas	3-O-112 Upflow Oil
HEATING ONLY **Complete Furnace Unit** Approximate Shipping Weight—Lbs.				**$302.00★★** 606	**$388.00** 722	**$287.00★★** 554	**$377.00** 673
AIR COOLED CYR-32 Cooling Coil Approximate Shipping Weight—Lbs.	22			$77.00 50	$77.00 50	$77.00 50	$77.00 50
CA-32 Air Cooled Condensing Unit★ 230—1—60	22			445.00	445.00	445.00	445.00
CA-32 Air Cooled Condensing Unit★ 208/220—3—60 Approximate Shipping Weight—Lbs.	22			433.00 414	433.00 414	433.00 414	433.00 414
Complete Air Cooled Combination Unit★		34,700†	34,700†				
230—1—60	22			**824.00**	**910.00**	**809.00**	**899.00**
208/220—3—60 Approximate Shipping Weight—Lbs.	22			**812.00** 1070	**898.00** 1186	**797.00** 1018	**887.00** 1137
WATER COOLED CW-32 Water Cooled Circuit★ 230—1—60	22			$419.00	$419.00	$419.00	$419.00
CW-32 Water Cooled Circuit★ 208/220—3—60 Approximate Shipping Weight—Lbs.	22			409.00 295	409.00 295	409.00 295	409.00 295
Complete Water Cooled Combination Unit★		29,400‡	34,500‡				
230 Volt—1 Phase—60 Cycle Approximate Shipping Weight—Lbs.	22			**721.00** 849	**807.00** 849	**706.00** 849	**796.00** 849
208/220 Volt—3 Phase—60 Cycle Approximate Shipping Weight—Lbs.	22			**711.00** 901	**797.00** 1017	**696.00** 849	**786.00** 968

5 H. P. Year 'Round Air Conditioning Units

NOT ASSEMBLED

Heating Ratings Gas Fired: {No. 5-A-175 has 175,000 Btu Input - 140,000 Btu at Bonnet.
{No. 5-A-140 has 140,000 Btu Input - 112,000 Btu at Bonnet.

Heating Ratings Oil Fired: {No. 5-O-140 has 175,000 Btu Input (1.25 gal.) - 140,000 Btu at Bonnet.
{No. 5-O-112 has 140,000 Btu Input (1.00 gal.) - 112,000 Btu at Bonnet.

UNIT NO. Type of Unit Type of Burner	Refrigerant Type No.	Net Cooling Capacity With 2000 C.F.M. Btu/Hr.	5-A-175 Upflow Gas	5-O-140 Upflow Oil	5-A-140 Upflow Gas	5-O-112 Upflow Oil
HEATING ONLY						
Complete Furnace Unit			**$375.00★★**	**$469.00**	**$375.00★★**	**$469.00**
Approximate Shipping Weight—Lbs.			745	873	745	873
AIR COOLED						
CYR-52 Cooling Coil			$118.00	$118.00	$118.00	$118.00
Approximate Shipping Weight—Lbs.			122	122	122	122
CA-52 Air Cooled ∫ 230—1—60	22		689.00	689.00	689.00	689 00
Condensing Unit★ \208/220—3—60	22		660.00	660.00	660.00	660.00
Approximate Shipping Weight—Lbs.			578	578	578	578
Complete Air Cooled Combination Unit★		54,300†				
∫ 230—1—60	22		**1182.00**	**1276.00**	**1182.00**	**1276.00**
\208/220—3—60	22		**1153.00**	**1247.00**	**1153.00**	**1247.00**
Approximate Shipping Weight—Lbs.			1445	1573	1445	1573
WATER COOLED						
RC-552Y Water Cooled 230—1—60	22		$900.00	$900.00	$900.00	$900.00
Condensing Circuit★ ONLY						
Approximate Shipping Weight—Lbs.			615	615	615	615
Complete Water Cooled Combination Unit★		62,900‡				
230—1—60 ONLY	22		**1275.00**	**1369.00**	**1275.00**	**1369.00**
Approximate Shipping Weight—Lbs.			1360	1488	1360	1488

★Prices Include Protection Plan on Refrigerant Circuit

NOTES

† **Heat generated by Blower Motor is deducted. Based upon 95° F. Air entering Condenser Coil; 80° F. Dry Bulb and 67° F. Wet Bulb Air entering Cooling Coil at C. F. M. indicated.**

‡ **Heat generated by Blower Motor is deducted. Based upon A. S. R. E. Conditions: 80° F. Dry Bulb and 67° F. Wet Bulb Air entering Cooling Coil; 75° F. Water entering and 95° F. leaving Condenser.**

★★**When Gas-Fired Unit is installed for Heating Only, No. AT72D, 115 Volt Honeywell Transformer must be ordered for operation of Electrical Controls.**

All Gas Fired Units are A.G.A. approved for Natural, Manufactured, Mixed or Liquefied Petroleum Gas. All Oil Fired Units are rated in accordance with U. S. Dept. of Commerce Commercial Standard for Warm Air Furnaces, No. C.S.-195.

Always Specify: (1) Air Cooled or Water Cooled. (2) Electrical Characteristics of Compressor Motor—either 230-ONE-60, or 208/220-THREE-60. (3) If Gas Fired—Type of Gas, Btu Value and Specific Gravity.

STANDARD EQUIPMENT

For Heating Only:

Wiring Harness. Fan and Limit Control.

2 and 3 H.P. Units: Steel Heating Element, Blower and Motor installed in Assembled, Enameled Casing. Honeywell No. T87 Combination Heating-Cooling Thermostat and No. Q405A Sub-Base.

5 H.P. Unit: Steel Heating Element, Enameled Casing, Blowers and Blower Motor, are shipped in separate cartons. Honeywell No. T87 Combination Heating-Cooling Thermostat and No. Q405A Sub-Base.

Gas Fired: Main Gas Burner. Pilot Burner. Automatic Gas Valve. Draft Hood. Automatic Pilot*. Main Shut-off Gas Valve.* Pilot Shut-Off Gas Valve.* Gas Pressure Regulator.*

*Where Liquefied Petroleum Gas is used, Combination Automatic Pilot and Main Shut-Off Gas valve with 100% shut-off is substituted at no additional cost.

Where Manufactured Gas is used, Pilot Gum Filter is furnished at no additional cost.

Oil Fired: OCU Oil Burner and Mounting Plate. Flue Connecting Elbow. Stack Switch. Draft Stabilizer. Precast Firebox.

Air Cooled Condensing:

CA Unit Assembled in Zinc Coated Baked Enameled Cabinet. Underwriters' Laboratories Listing for outdoor installation. Hermetic Compressor with Refrigerant Cooled Motor, shipped with holding charge of Refrigerant. Condenser Coil. Centrifugal Condenser Blower and Motor. Service and Charging Valves. Refrigerant Tubing Connections. Electrical Wiring Terminals and Compressor Starting Capacitors for Single Phase Units, No. W402A Honeywell Control Relay Panel for Unit No. CA-21, No. W226C Panel for Unit Nos. CA-32 and CA-52.

CYR Cooling Coil with Mounting Frame: Expansion Valve, Condensate Pan and Drain Connection. Refrigerant Tubing Connections. Refrigerant Drier.

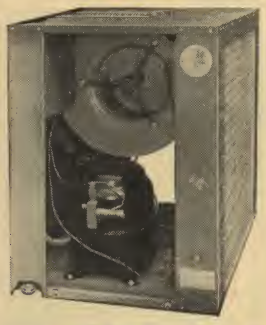
Water Cooled Condensing:

CW Circuit for 2 and 3 H. P. Units, and RC-552Y Circuit for 5 H. P. Units: Compressor with Refrigerant Cooled Motor. Cooling Coil. Water Cooled Condenser. Charged with Refrigerant. Control Relay Panel, including Electrical Wiring Terminals and Compressor Starting Capacitors for Single Phase Units.

ACCESSORIES FOR YEAR 'ROUND AIR CONDITIONING UNITS

	Approx. Shipping Wt.-Lbs.	Net Dealer Price
"Add-On" Vestibules (Covers to conceal Burner and Controls—See illustration on Back Cover)		
2-A-100	30	**$13.00**
2-O-84	36	**15.00**
3-A-140	38	**15.00**
3-O-112	45	**17.00**
3-HC-140	25	**7.00**
3-OHC-112	35	**7.50**
Side or Rear Air Intake Filter Frames		
2-A-100, 2-O-84 (Side only)	6	**5.00**
3-A-140, 3-O-112 (Side only)	6	**5.00**
5-A-175, 5-O-140, 5-A-140, 5-O-112 (Rear only)	12	**7.00**
Base for Combustible Floors (Counterflow Units only)		
3-HC-140, 3-OHC-112	50	**17.50**
Automatic Change-Over Damper Kit (Motor and Fittings for changing Damper from Heating to Cooling)		
2-A-100, 2-O-84, 3-A-140, 3-O-112	6	**22.00**
3-HC-140, 3-OHC-112	6	**27.00**
No. AT72D Transformer (For Gas Fired Units when installed for Heating Only)	5	**$ 3.86**
Automatic Water Valves		
No. 246PO3-⅜", R-12, for CW-2	3	**11.83**
No. 246PO422-½", R-22, for CW-32	3	**11.83**
Refrigerant Drier		
No. C-163 for CA-21 or CA-32	5	**5.00**
No. C-304 for CA-52	5	**11.50**
Push-Button Lighter for Gas Units (Specify Unit No.)		
2-A-100,	3	**5.50**
3-A-100, 3-HC-140	3	**5.50**
5-A-175, 5-A-140	3	**5.50**
Two-Stage Pump for Oil Units—Add to Net Dealer Price	--	**5.00**
Automatic Humidifier (Skuttle No. 450)	5	**10.50**
Dual Fuel: For substitution of Dual Fuel Controls—Natural Gas to Liquefied Petroleum Gas—Add to Net Dealer Price		**36.00**

SUMMER AIR CONDITIONING UNITS
Air Cooled 2, 3 and 5 H. P. Add-On Units



Series CA, Air Cooled Condensing Unit. Listed by U. L. for outdoor installation. Unit is connected to Cooling Coil with copper refrigerant tubing. Top Air Discharge is Standard Equipment.

Series CA, Air Cooled Condensing Unit with Plenum Top and Grille (an Accessory) Installed. Available for installation where horizontal discharge is desirable.

Series DXH, Duct Type Cooling Coil for installation in air discharge duct of furnace where supply trunk is extended in one direction only.

Series DXO, Plenum Type Cooling Coil for installation above Upflow Furnace, where air supply runs are extended in more than one direction.

Series CA—Air Cooled Condensing Units

UNIT NO.	Electrical Characteristics Volts-Phase-Cycles	Refrigerant Type No.	Compressor Motor H.P.	Cooling Capacity Btu/Hr.*	—Condenser Blower— Blower No.	Motor H.P.	Nominal C.F.M.	Approx. Shipping Wt-Lbs.	Net Dealer Price★
CA-21	230—1—60 (ONLY)	12	2	20,700	10-10	1/3	1800	450	**$359.00**
CA-32	230—1—60	22	3	35,500	12-12	1/2	2650	414	**445.00**
	208/220—3—60								**433.00**
CA-52	230—1—60	22	5	56,100	(2)10-10	3/4	3700	578	**689.00**
	208/220—3—60								**660.00**

*Based upon Calorimeter Tests in accordance with A. S. R. E. Standard No. 14-41, Group No. 8

Series DXH—Flat—Duct Type—Horizontal Flow Cooling Coils

UNIT NO.	Refrigerant Type No.	Cooling Capacity with —Series CA Condensing Unit— Btu/Hr.**	With C.F.M. of:**	(Includes Steel Casing) Approx. Ship. Wt. Lbs.	Net Dealer Price
DXH-2	12	21,800	800	69	**$78.00**
DXH-32	22	36,600	1200	58	**91.00**
DXH-52	22	57,100	2000	85	**118.00**

Series DXO—Round or Oval—Plenum Type—Upflow Cooling Coils

UNIT NO.	Refrigerant Type No.	Cooling Capacity with —Series CA Condensing Unit— Btu/Hr.**	With C.F.M. of:**	(Without Galvanized Plenum) Approx. Ship. Wt. Lbs.	Net Dealer Price	(With Galvanized Plenum) Approx. Ship. Wt. Lbs.	Net Dealer Price
DXO-21	12	21,800	800	25	**$69.00**	48	**$76.00**
DXO-32	22	36,800	1200	40	**77.00**	70	**84.50**
DXO-52	22	55,200	1750	50	**114.00**	89	**123.50**

Series DXR—Counterflow Cooling Coils

UNIT NO.	Refrigerant Type No.	Cooling Capacity with —Series CA Condensing Unit— Btu/Hr.**	With C.F.M. of:**	(Without Enameled Casing) Approx. Ship. Wt. Lbs.	Net Dealer Price	(With Enameled Casing) Approx. Ship. Wt. Lbs.	Net Dealer Price
DXR-32	22	36,000	1200	60	**$ 99.00**	104	**$115.00**
DXR-52	22	56,500	2000	97	**132.00**	155	**152.00**

**Based upon 95°F. air entering Condenser Coil, 80°F. Dry Bulb and 67°F. Wet Bulb air entering Cooling Coil at the C.F.M. indicated.

★Prices Include Protection Plan on Refrigerant Circuit.

Always Specify: Electrical Characteristics of Compressor Motor—either 230-ONE-60 or 208/220-THREE-60.

STANDARD EQUIPMENT

CA Units

Assembled in Zinc Coated Baked Enameled Cabinet. Underwriters' Laboratories Listing for outdoor installation. Hermetic Compressor with Refrigerant Cooled Motor, shipped with holding charge of Refrigerant. Condenser Coil, Centrifugal Condenser Blower and Motor. Service and Charging Valves. Refrigerant Tubing Connections. Electrical Wiring Terminals and Compressor Starting Capacitors (for Single Phase Units). No. W402A Honeywell Control Relay Panel for No. CA-21. Honeywell No. W226C Panel for Nos. CA-32 and CA-52.

DXH Cooling Coils

Aluminum Fin on Copper Tubing Construction. Insulated, Enameled Steel Casing with Access Door. Expansion Valve. Refrigerant Drier. Refrigerant Tubing Connections. Condensate Drain Connection. Built-In Condensate Drain Pan.

DXO Cooling Coils

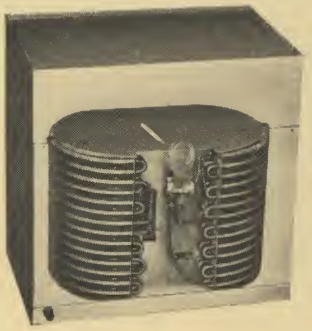
Aluminum Fin on Copper Tubing Construction. Expansion Valve. Refrigerant Drier. Refrigerant Tubing Connections. Supporting Condensate Drain Pan. Condensate Drain Connection.

DXR Cooling Coils

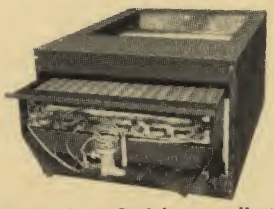
Aluminum Fin on Copper Tubing Construction. Expansion Valve. Refrigerant Drier. Refrigerant Tubing Connections. Condensate Drainage Trays, Pan and Connection.

SUMMER AIR CONDITIONING UNITS

Counterflow Cooling Coils



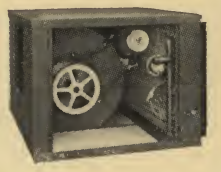
Galvanized Plenum (an accessory) for DXO Cooling Coil. Plenum is 30 inches high and equipped with top and base plate.



Series DXR Cooling Coil for installation below Counterflow Furnace showing easy slide-in installation into Accessory Enameled Casing.

Accessory Casing for DXR Cooling Coil. Available for installation without the coil. Provides for later addition of DXR Coil.

Blower - Coil Units



Series BC Blower and Cooling Coil Unit pictured as shipped from factory, ready for connection to ducts. Access Panel removed to show Integral Blower.

Series BC Blower and Cooling Coil Unit pictured with Access Panel removed to show Integral Blower. Discharge and Intake Plenums and Grilles (an Accessory) are installed.

ACCESSORIES FOR AIR COOLED ADD-ON UNITS

	Approx. Shipping Wt. Lbs.	Net Dealer Price
Plenum-Grille for Series CA (For horizontal discharge of condenser air):		
For No. CA-21	40	**$14.00**
For No. CA-32	40	**14.00**
For No. CA-52	48	**16.00**
Galvanized Plenum for Series DXO (For later addition of Cooling Coil, when Furnace is installed for Heating only):		
For No. DXO-21 Cooling Coil	23	**7.00**
For No. DXO-32 Cooling Coil	30	**7.50**
For No. DXO-52 Cooling Coil	39	**9.50**
Enameled Casing for Series DXR (for later addition of Cooling Coil when Furnace is installed for Heating only):		
For No. DXR-32 Cooling Coil	44	**16.00**
For No. DXR-52 Cooling Coil	58	**20.00**

	Approx. Shipping Wt. Lbs.	Net Dealer Price
Type "M" Heating Pad (For Compressor, when Refrigerant Charge exceeds recommended limit of 12 lbs. for No. CA-32 and 15 lbs. for No. CA-52) For No. CA-32 or CA-52 Condensing Unit	5	**$ 7.50**
Combination Heating and Cooling Thermostat and Sub-Base Honeywell No. T87 Thermostat and No. Q405A Sub-Base	3	**15.86**
Relay for Furnace equipped with Self-Generating Controls (For No. CA-21 Only) Honeywell No. R882A	3	**12.04**
Refrigerant Drier (For CA Unit when ordered without Cooling Coil)		
No. C-163 for No. CA-21 or CA-32	5	**5.00**
No. C-304 for No. CA-52	5	**11.50**

Series BC—Blower and Cooling Coil Units

UNIT NO.	Refrigerant Type No.	—Net Cooling Capacity with— Series CA Condensing Unit Btu/Hr.*	With C.F.M. of*	—Air Distribution Blower— Blower No.	Motor H.P.	Electrical Characteristics	Approx. Shipping Wt. Lbs.	Net Dealer Price
BC-32	22	34,000	1200	10-10	⅓	115—1—60	190	**$160.00**
BC-52	22	55,300	2000	12-12	½	115—1—60	270	**204.00**

***Heat generated by Blower Motor is deducted. Based upon 95° F. air entering Condenser Coil, 80° F. Dry Bulb and 67° F. Wet Bulb air entering Cooling Coil at the C.F.M. indicated.**

STANDARD EQUIPMENT

Cooling Coil with Aluminum Fin on Copper Tubing Construction. Blower and Motor. Insulated Enameled Steel Casing with Access Doors. Expansion Valve. Refrigerant Drier. Refrigerant Tubing Connections. Condensate Drain Connection. Built-in Condensate Drain Pan. Disposable Filter.

ACCESSORIES FOR BLOWER-COIL UNITS

	Approx. Shipping Wt. Lbs.	Net Dealer Price
Discharge Plenum with Grille		
For No. BC-32	27	**$20.00**
For No. BC-52	34	**25.00**
Intake Plenum with Grille		
For No. BC-32	22	**17.50**
For No. BC-52	28	**20.00**
Combination Heating-Cooling Thermostat and Sub-Base Honeywell No. T87 Thermostat and Q405A Sub-Base	3	**15.86**

SUMMER AIR CONDITIONING UNITS
Water Cooled 3 and 5 Ton Add-On Units

No. H-312-W, Summer Air Conditioning Unit, showing Integral Blower and Side Air Intake and Filter Frame.

No. H-312-W, Summer Air Conditioning Unit, with Discharge Plenum and Grille (an Accessory) installed. Available for installation where cooling air is discharged directly into room.

No. H-511-W, 5-Ton Summer Air Conditioning Unit, showing Filter Rack (an Accessory) for Connection of Return Air Duct. Return Air can also enter through bottom of Unit.

Series H-W—Water Cooled Add-On Units

SHIPPED COMPLETELY ASSEMBLED.

UNIT NO.	Electrical Characteristics Volts-Phase-Cycles	Refrigerant Type No.	Compressor Motor H.P.	Nominal Capacity Tons	Cooling Capacity Btu/Hr.*	—Air Distribution Blower— Blower No.	Motor H.P.	Nominal C.F.M.	Approx. Shipping Wt. Lbs.	Net Dealer Price★
H-312-W	230—1—60	22	3	3	38,700	10-10	⅓	1200	437	**$500.00**
H-312-W	208/220—3—60	22	3	3	38,700	10-10	⅓	1200	437	**490.00**
H-511-W	230—1—60 Only	12	5	5	60,000	12-12	½	2000	780	**753.00**

★Prices Include Protection Plan on Refrigerant Circuit

***Heat generated by Blower Motor is deducted. Based upon A.S.R.E. Conditions: 80° F. Dry Bulb and 67°F. Wet Bulb Air entering Cooling Coil at 400 C. F. M. per Ton; 75° Water entering and 95° leaving Condenser.**

INSTRUCTIONS FOR ORDERING

Always Specify: Electrical Characteristics of Compressor Motor—either 230-ONE-60 or 208/220-THREE-60.

STANDARD EQUIPMENT

Refrigerant Circuit factory charged. Compressor with Refrigerant Cooled Motor. Water Cooled Condenser. Cooling Coil with Expansion Valve. Insulated, Baked Enameled Cabinet. Internally wired with Electrical Control Panel.

Starting Capacitors for Single Phase Units.
Honeywell No. TA87 Combination Heating and Cooling Thermostat and No. Q405A Sub-Base. Disposable Filters.

ACCESSORIES FOR WATER COOLED UNITS

	Approx. Shipping Wt. Lbs.	Net Dealer Price
Automatic Water Valves		
No. 246PO422-½", R-22, for No. H-312-W	3	**$11.83**
No. 246PO6-¾", R-12, for No. H-511-W	4	**13.61**
Rear Filter Rack, for No. H-511-W	24	**10.00**
Plenum-Grille for No. H-312-W	53	**20.00**

E. E. SOUTHER IRON CO.

1952 Kienlen Ave. **St. Louis 20, Missouri**

Printed in U. S. A. 4593

No. 286
Supersedes
No. 246

Southaire

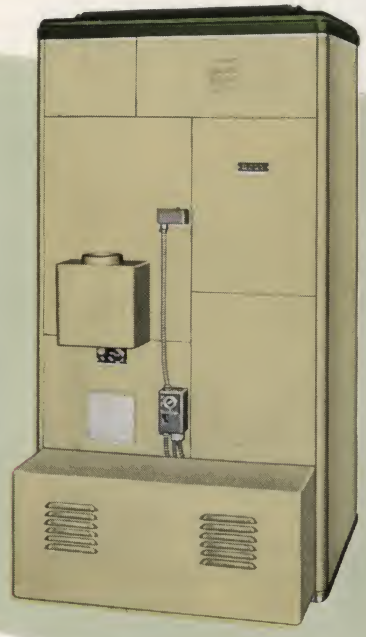
Complete Air Conditioning with YEAR 'ROUND AIR CONDITIONING UNITS

Water Cooled 5 H.P. Model with all Cabinet Panels Installed.

AIR COOLED
or
WATER COOLED

GAS FIRED
or
OIL FIRED

2 or 3 H.P. Basement-Utility Model with handsome Add-On Vestibule installed



2 or 3 H.P. Counterflow Model with optional Burner Cover installed

E. E. SOUTHER IRON CO.

1952 Kienlen Ave. **St. Louis 20, Missouri**

Southaire COMPLETE AIR CONDITIONING

ADVANTAGES of THE COMPLETE AIR CONDITIONING UNIT

ONE UNIT DOES THE WORK OF TWO: The Year 'Round Air Conditioning Unit is a *complete air conditioning unit*—a combination summer cooling and winter heating unit in a single cabinet. This *one* unit uses the same system of ducts to transmit either cooled or heated air to every room in the air conditioned building. This *compact* unit requires no more installation space than many conventional furnaces.

AUTOMATIC TEMPERATURE CONTROL: Whether for cooling or heating, the Year 'Round Air Conditioning Unit maintains even, agreeable indoor temperatures, as selected. A simple setting of the thermostat adjusts the temperature, as desired.

PERFECTED INDOOR CLIMATE: Complete air conditioning is controlled year 'round temperature—plus. In addition to heating the air in cool weather, the Year 'Round Air Conditioning Unit filters, circulates, and when desirable, can be made to add moisture. In addition to cooling in warm weather, the Year 'Round Air Conditioning Unit removes excess moisture, strains out dust and pollens, and fully ventilates every air conditioned room.

SCIENTIFICALLY PROPORTIONED AIR CONDITIONING: Careful engineering has determined the balance of summer to winter air conditioning best suited to most operating conditions. The cooling circuit and heating plant, in all sizes of the Year 'Round Air Conditioning Unit, are matched to meet these conditions. Use of the Year 'Round Air Conditioning Unit eliminates on-the-job engineering and later adjustment, often encountered when a cooling unit is added to a forced air furnace.

LESS COSTLY INSTALLATIONS: Because the Year 'Round Air Conditioning Unit is engineered to do its two-fold job of air cooling and heating in one cabinet, its original cost can be less than for a quality forced air furnace and an added cooling unit. Because the Year 'Round Air Conditioning Unit requires only one discharge and one return air connection, ductwork is less complicated and less costly. Because few parts of the Year 'Round Air Conditioning Unit require on-the-job assembly, and these are packaged as matching components, installation time is minimized.

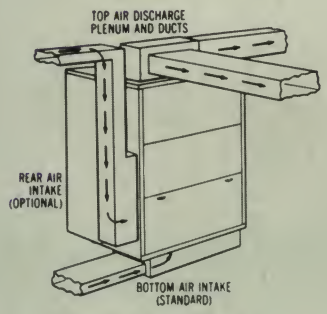
FULL PROVISION FOR FUTURE COOLING: The Year 'Round Air Conditioning Unit can be installed for heating only. The cooling section of its cabinet is left empty, but all duct connections are made at the time of installation.

Without its cooling circuit, the Year 'Round Air Conditioning Unit is an excellent winter air conditioner, which is comparable in price to forced air heating units of comparable capacity and quality.

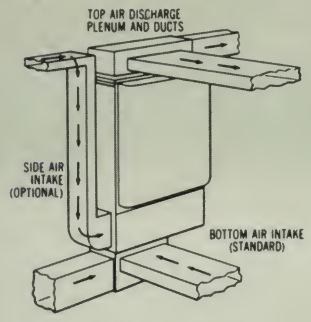
Either the air cooled or water cooled type of cooling circuit can be purchased at a later time. When installed, the cooling coil of the air cooled circuit or the complete mechanism of the water cooled circuit will fit readily into the cooling section of the cabinet. No adjustment of ductwork will be necessary.

The completed Year 'Round Air Conditioning Unit will then be ready to provide summer as well as winter air conditioning—complete air conditioning.

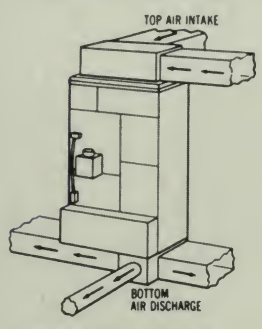
VERSATILE COMPACT INSTALLATIONS



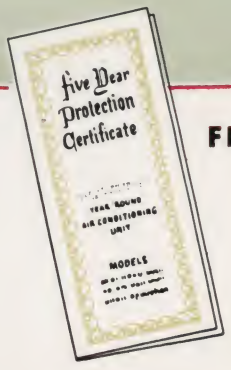
THE 5 H. P. UNIT



THE 2 OR 3 H. P.
UPFLOW UNIT



THE 2 OR 3 H. P.
COUNTERFLOW UNIT

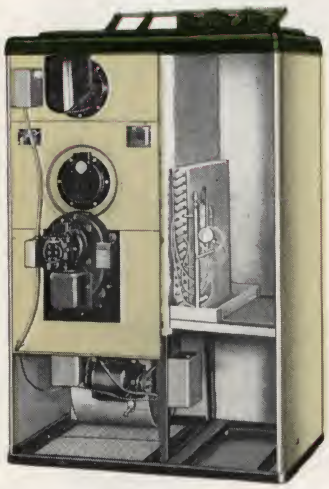


FIVE YEAR PROTECTION PLAN

The Five Year Protection Plan guarantees all parts of the Year 'Round Air Conditioning Unit against defects of material or workmanship for a full year. Following the first year, an Extended Four Year Warranty provides for repair or replacement of the Cooling Circuit—Compressor, Condenser or Cooling Coil—for the remaining four years.

with YEAR 'ROUND AIR CONDITIONING UNITS

2 or 3 H. P. YEAR 'ROUND UNITS for BASEMENT or UTILITY ROOM INSTALLATIONS

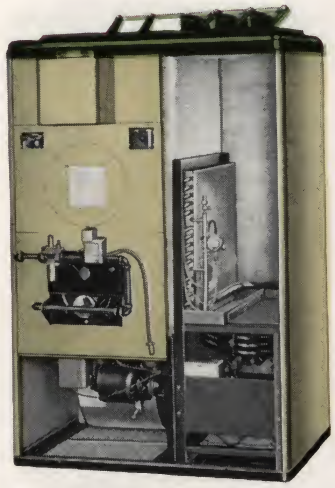


Basement-Utility Unit with Cooling Coil of Air Cooled Cooling Circuit and Oil Burner installed. Oil Fired No. 2-0-84 has 2 H.P. cooling combined with 84,000 Btu heating capacity at the Bonnet. Oil Fired No. 3-0-112 has 3 H.P. cooling and 112,000 Btu heating at Bonnet.

The Basement-Utility (or upflow) Year 'Round Air Conditioning Unit draws in return air through an opening in its base and discharges conditioned cooled or heated air from an opening at its top.

The compact construction and low height of this unit adapt it well to basement installations, where air ducts are installed overhead and out-of-the-way in the open spaces between floor joists. These ducts lead to registers located on or near outside walls where the need for cooling or heating is greatest. When the Basement-Utility Unit is installed in a basement, return air can be made to enter its left side through an optional Side Air Intake and Filter Frame.

This unit is also designed to be installed in a utility room or closet space, with overhead ducts extended to registers high on side walls, or to ceiling diffusers. The type of installation depends largely on outdoor climate.



Basement-Utility Unit with complete Water Cooled Cooling Circuit and Gas Burner installed. Gas Fired No. 2-A-100 combines 2 H.P. cooling with 100,000 Btu Input heating. Gas Fired No. 3-A-140 has 3 H.P. cooling combined with 140,000 Btu Input heating.

Years Ahead DESIGN AND CONSTRUCTION

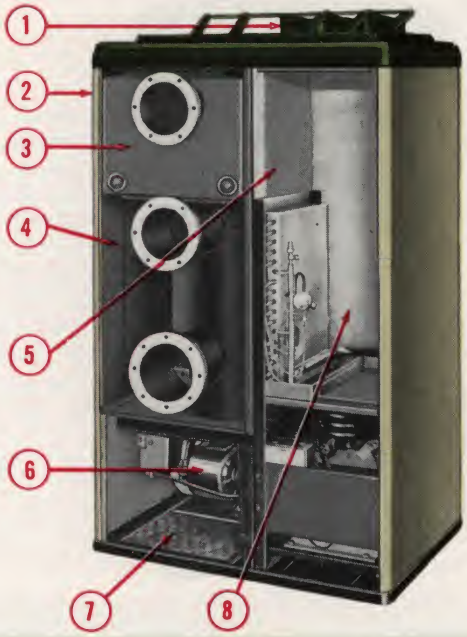
1. CHANGEOVER DAMPERS: Change the unit from summer to winter air conditioning, or visa versa. Can be operated automatically from a switch on the thermostat when the accessory Automatic Damper Motor is installed.

2. STURDY CABINET: Compact and Rigid. Attractive Add-On Vestibule to conceal burner is optional.

3. HEATING ELEMENT: Die-formed heavy gauge steel welded into a leak-proof, gas-tight chamber. Can be completely removed without disturbing ducts, cabinet sides or top. Radiator is equipped with accessible clean-out ports.

4. RADIATION PANELS: Increase heating surface and efficiency. Insulate cabinet walls.

5. CABINET INSULATION: Blankets of glass fibers provide noise and heat insulation for cooling compartment.

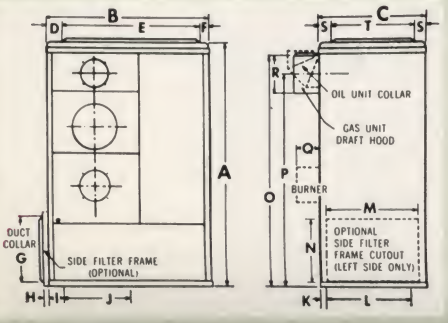


6. LARGE CAPACITY BLOWER: Circulates the conditioned air for summer cooling or winter heating. Resiliently mounted. Has permanently lubricated bearings.

7. AIR FILTER: Large area Glass Fiber Filter is conveniently located at bottom of unit.

8. COOLING SECTION: Either the entire Water Cooled Cooling Circuit, as illustrated, or the Cooling Coil of the Air Cooled Circuit is installed here. With the Air Cooled Circuit, this Cooling Coil is connected to the remotely installed Air Cooled Compressor-Condenser Unit by means of copper tubing. This unit is a separate assembly of the Compressor, air cooled Condenser Coil, Condenser Blower and Motor, housed in its own Weather-Resistant Cabinet for either outdoor or indoor remote installation.

DIMENSIONS FOR INSTALLATION PLANNING



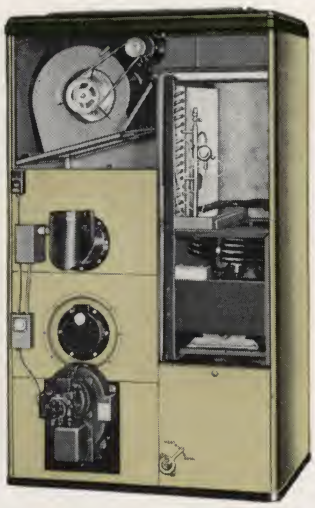
DIMENSIONS IN INCHES

Model No.	Height A	Width B	Depth C	Warm Air Plenum E x T	Return Air Plenum J x L	Optional Side Filter Frame Duct Collar G	D	F	H	I
2-A-100	62-1/2	36-1/2	26	28x22	14x23	23x14	4-3/8	4-3/8	1-1/2	2-1/2
2-O-84	62-1/2	36-1/2	26	28x22	14x23	23x14	4-3/8	4-3/8	1-1/2	2-1/2
3-A-140	66	44-1/2	29	38x22	18x23	23x18	4-3/8	2-3/8	1-1/2	4
3-O-112	66	44-1/2	29	38x22	18x23	23x18	4-3/8	2-3/8	1-1/2	4

Model No.	K	M	N	S	Height to Top of Flue Collar O	Height to Ctr. of Flue Opening P	Depth of Burner Q	Depth of Draft Diverter or Flue Collar R	Flue Dia.	Filter Size	Projection of Optional Add-On Vestibule
2-A-100	1-3/4	22-3/4	13-3/4	2-1/8	58-3/4	54-1/2	5	10	5	16x25x1	7
2-O-84	1-3/4	22-3/4	13-3/4	2-1/8	58-3/4	54-1/2	13	10	6	16x25x1	13
3-A-140	1-3/4	22-3/4	17-3/4	3-5/8	62-1/2	57-1/2	6	10	6	20x25x1	8
3-O-112	1-3/4	22-3/4	17-3/4	3-5/8	62-1/2	57-1/2	13	10	7	20x25x1	13

Southaire COMPLETE AIR CONDITIONING

2 or 3 H. P. COUNTERFLOW YEAR 'ROUND UNITS for "PERIMETER" INSTALLATIONS in BASEMENTLESS BUILDINGS

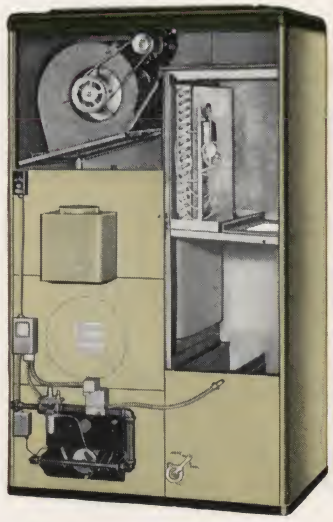


Counterflow Unit with Water Cooled Cooling Circuit and Oil Burner installed. Oil Fired No. 2-OHC-84 has 2 H.P. capacity combined with 84,000 Btu heating capacity at Bonnet. Oil Fired No. 3-OHC-112 has 3 H.P. cooling and 112,000 Btu at Bonnet.

The Counterflow (or downflow) Year 'Round Air Conditioning Unit draws in return air from an opening in its top and discharges conditioned cooled or heated air from an opening at its base.

Thus, the Counterflow Unit is best adapted for installation in homes without basements, where air supply ducts are either imbedded in a concrete floor slab or located under the floor in a "crawl" space. In such an installation the ducts can readily be extended to registers on or near the "perimeter" or outside walls of the building, where conditioned air supplied for summer cooling or winter heating is most effective.

A further advantage of the Counterflow Unit is space saved. When a conventional upflow unit is adapted to operate as a downflow unit, complicated and unsightly ductwork must be installed to carry discharge air from its top to the floor. Use of the Counterflow Unit eliminates such ductwork.



Counterflow Unit with Cooling Coil of Air Cooled Circuit and Gas Burner installed. Gas Fired No. 2-HC-100 combines 2 H.P. cooling with 100,000 Btu Input heating. Gas Fired No. 3-HC-140 has 3 H.P. cooling and 140,000 Btu Input heating.

Years Ahead DESIGN AND CONSTRUCTION

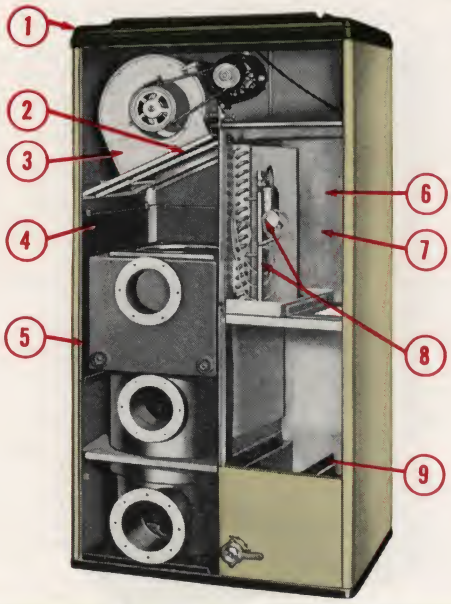
1. DURABLE CABINET: Distinctively styled with rounded corners. Accessory Cover to conceal burner is available.

2. AIR FILTER: Glass Fiber Filter covers large area return air opening.

3. QUIET AIR BLOWER: High capacity Centrifugal Blower circulates cooled or heated conditioned air. Resiliently mounted. Permanently lubricated bearings.

4. RADIATION PANELS: Provide increased efficiency by increasing heating area.

5. STEEL HEATING ELEMENT: Die-formed and electrically welded into leak-proof, gas-tight chamber. Completely removable from front without disturbing cabinet sides and top, or ducts. Accessible Clean-Out Ports in radiator.



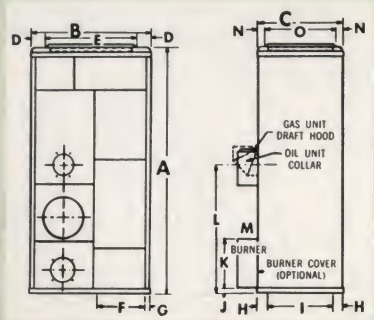
6. GLASS FIBER INSULATION: Glass Fiber blanketing provides heat and sound insulation for cooling section.

7. COOLING SECTION: Either the Cooling Coil of the Air Cooled Circuit or the entire Water Cooled Circuit is installed here. Illustration shows Cooling Coil of Air Cooled Circuit, installed and ready for connection to the Air Cooled Compressor-Condenser Unit by means of copper tubing.

8. REFRIGERANT LINE CONNECTIONS: Conveniently located for attachment of copper tubes which lead to Condensing Unit and become Liquid and Suction Lines of completed circuit.

9. CHANGEOVER DAMPERS. Change the unit from summer to winter air conditioning, or visa versa. Automatic operation is available with Accessory Damper Motor which is controlled at the thermostat.

DIMENSIONS FOR INSTALLATION PLANNING



DIMENSIONS IN INCHES

Model No.	Height A	Width B	Depth C	Warm Air Plenum F x I	Return Air Plenum E x O	D	G	H	J	K	N
2-HC-100	73	36-1/2	26	15 x 20	28 x 22	4-3/8	1-1/2	3	1-1/2	14-1/2	2-1/8
2-OHC-84	73	36-1/2	26	15 x 20	28 x 22	4-3/8	1-1/2	3	4	25	2-1/8
3-HC-140	75	44-1/2	29	16 x 23	34 x 22	5-1/4	1-1/2	3	4-1/2	14-1/2	3-3/8
3-OHC-112	75	44-1/2	29	16 x 23	34 x 22	5-1/4	1-1/2	3	5	25	3-3/8

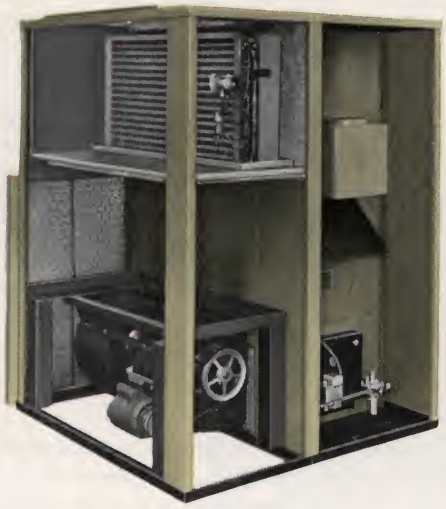
Model No.	Height to Top of Flue Collar	Height to Ctr. of Flue Opening L	Depth of Burner M	Depth of Draft Diverter or Flue Collar	Flue Dia.	Filters		Projection of Optional Burner Cover
						No.	Size	
2-HC-100	42-1/4	38	5	10	5	1	20x25x1	5
2-OHC-84	42-1/4	38	13	10	6	1	20x25x1	13
3-HC-140	43-1/2	38-1/2	6	10	6	2	16x20x1	6
3-OHC-112	43-1/2	38-1/2	13	10	7	2	16x20x1	13

with YEAR 'ROUND AIR CONDITIONING UNITS

5 H. P. YEAR 'ROUND UNIT for LARGE HOMES, OFFICES and STORES

At right, panels are removed from the cooling section to show the extra-large Cooling Coil of the Air Cooled Cooling Circuit. This Cooling Coil is connected with copper tubing to a remotely installed Compressor-Condenser Unit, which is a separate assembly of the Compressor, Air Cooled Condenser, Blower and Motor.

Panels are also removed from front of heating section to show Gas Burner installed. With 175,000 Btu Input, this Gas Fired unit is No. 5-A-175. With 140,000 Btu Input, this Gas Fired unit is No. 5-A-140. Approved by A.G.A. to burn Natural, Manufactured, Mixed or Liquefied Petroleum Gas.



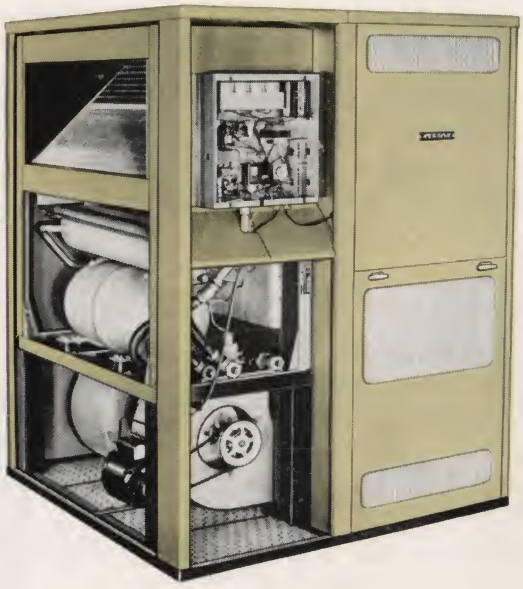
High capacity, complete air conditioning from a single unit is supplied by the 5 H.P. Year 'Round Air Conditioning Unit.

One handsome cabinet, requiring little space in relation to the large capacity of this unit, contains both the Heating Plant and either the Cooling Coil of the Air Cooled Cooling Circuit or the entire Water Cooled Circuit. This all-in-one design makes possible a cabinet so attractive that it does not need to be placed out-of-sight in offices or stores.

Flexibility of operation is provided by a choice of either 175,000 or 140,000 Btu Input heating, with either Gas or Oil Burner. The lower heating capacity makes possible more satisfactory installations in localities where winters are mild and summers are exceedingly hot and humid or in stores where the need for heating is lower than that for cooling.

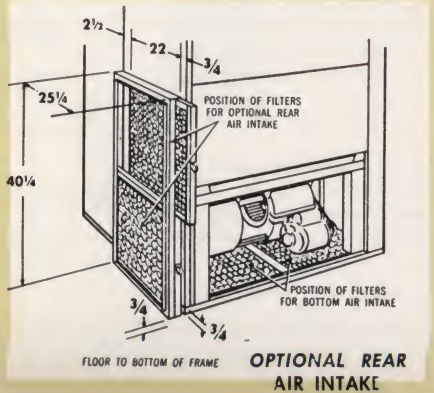
Burns either GAS or OIL with equal efficiency

At left, panels have been removed from front of heating section to illustrate the Oil Burner installed. With 140,000 Btu at Bonnet, this Oil Fired unit is No. 5-0-140. With 112,000 Btu at Bonnet this Oil Fired unit is No. 5-0-112. Rated in accordance with the U.S. Dept. of Commerce Commercial Standard No. CS-195.



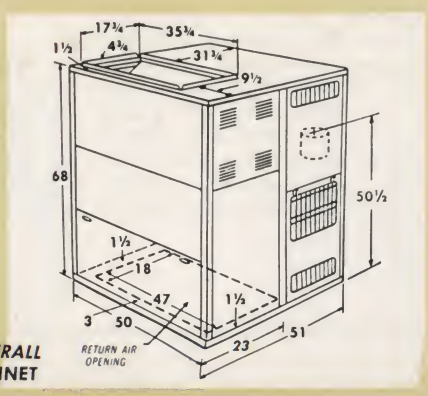
Above, panels are removed from side and front of 5 H.P. Unit to reveal the Water Cooled Cooling Circuit installed, and to show the large-area Cooling Coil, water cooled Condenser, heavy duty Compressor, twin Blowers, Blower Motor and Filters from the side. Electrical Control and Terminal Panel, Water Inlet and Outlet and Condensate Drain Connections are readily accessible at the front.

DIMENSIONS FOR INSTALLATION PLANNING



FILTER SIZE:
(2) 20" x 25" x 1"

FLUE DIAMETER
GAS 7"; OIL 8"



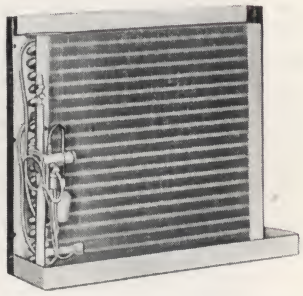
Southaire COMPLETE AIR CONDITIONING

AIR COOLED COOLING CIRCUIT

Installation of the Air Cooled Cooling Circuit as the summer air conditioning system of the Year 'Round Air Conditioning Unit solves any water supply problem. This Air Cooled Circuit operates without water and performs with efficiency comparable to that of a water cooled system.

When the Air Cooled Circuit is used, only the Cooling Coil is installed in the cooling section of the Year 'Round Air Conditioning Unit. The feature of maintaining an even balance of conditioned heated and cooled air, supplied from a single compacted cabinet, is retained.

The Cooling Coil is connected to a separate Air Cooled Condensing Unit by means of copper refrigerant tubing, which becomes the Liquid and Suction Lines of the completed circuit. The Condensing Unit is comprised of the Compressor, air cooled Condenser Coil, Condenser Blower and Motor, which are contained in their own weather-resistant cabinet and can be installed out-of-doors or indoors equally well.



Cooling Coil of the Air Cooled Circuit is equipped with Expansion Valve, Condensate Drain Pan, Drain and Refrigerant Tubing Connections. Entire assembly is readily bolted to the Division Panel within the cabinet of the Year 'Round Air Conditioning Unit.

Years Ahead AIR COOLED CONDENSING UNIT

This separate assembly of mechanical components is designed and constructed to be installed out-of-doors, where any operating noise will be isolated from living or bedrooms.

The top air exhaust discharges heated air up and away from the unit and nearby rooms, porches, gardens, lawns, shrubbery or trees. This feature also conserves space when the unit is installed indoors.

The greater cooling surfaces of the larger Condensing Coil offer lower resistance to air flow, thus permitting greater air circulation in relation to the amount of energy which the blower motor must put forth.

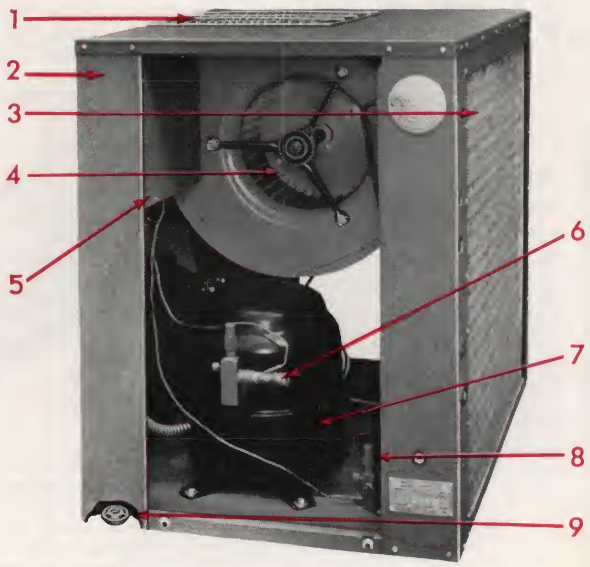
The heavy duty Compressor is operated by a powerful, refrigerant-cooled motor which runs without strain under normal cooling loads and has extra power for heavy loads.

1. UPWARD AIR EXHAUST: Discharges away from adjacent buildings, trees or gardens.

2. WEATHERPROOF CONSTRUCTION: Zinc-coated 16-gauge Steel Cabinet is heavily coated with baked enamel and has specially designed channels in base for water drainage.

3. LARGE-AREA CONDENSER COIL: Provides greater operating efficiency with increased cooling surface and reduced air friction.

4. CENTRIFUGAL BLOWER: Operates with greater efficiency than propellor type. Equipped with Ball Bearings.



5. WIRING BOX: Weatherproof cabinet, which houses electrical controls and wiring terminals, is within easy reach.

6. SUCTION-LINE VALVE: Service Valve has Gauge-port and Swedged End for soldered connection.

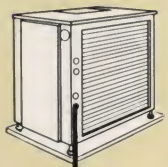
7. EXTRA-DUTY COMPRESSOR: With heavy-duty Refrigerant-cooled Motor.

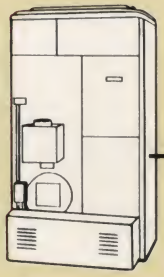
8. LIQUID-LINE VALVE: Charging and Service Valve has Gauge-port and Threaded-flare Connection.

9. MOUNTING BUSHINGS: Provide for ¾-inch Pipe Legs.

DIAGRAM OF TYPICAL AIR COOLED INSTALLATION

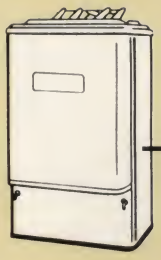
Compressor-Condenser Unit as installed outdoors. Flanged ¾" Pipe Feet raise unit from supporting reinforced concrete slab. Liquid and Suction Refrigerant Lines, which lead to Cooling Coil installed in cabinet of Year 'Round Air Conditioning Unit, are fabricated from copper tubing.





Counterflow Unit as installed in utility room or closet. Either cooled or heated conditioned air is supplied from base of this unit to ducts located in or under the floor.

Basement-Utility Unit as installed in basement, utility room or closet. Heated or cooled conditioned air is supplied from top of this unit to ducts located overhead.



with YEAR 'ROUND AIR CONDITIONING UNITS

WATER COOLED COOLING CIRCUIT

The Water Cooled Cooling Circuit offers the advantage of compact installation completely within the cabinet of the Year 'Round Air Conditioning Unit.

Wherever water supply is not a problem, or where a separate Cooling Tower is installed, the Water Cooled Circuit provides unmatched performance and unexcelled operating efficiency.

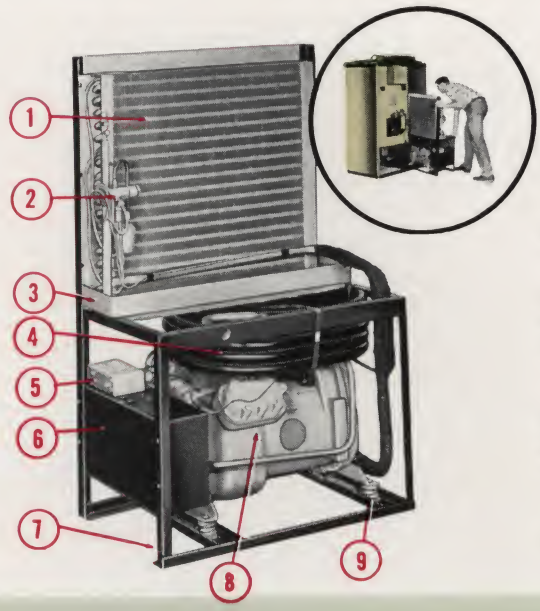
The Water Cooled Circuit is charged with Freon refrigerant gas and sealed at the factory. Water supply, a drain and electrical connection only are needed for installation and operation of this complete, compact cooling circuit.

1. COOLING COIL: Large in area. Mounted vertically for more effective drainage of condensate water.

2. EXPANSION VALVE: Provides trouble-free control of the flow of Freon to the cooling coil, relative to temperature of air passing through the coil.

3. CONDENSATE DRAIN: ¾" Female Pipe Nipple is provided for convenient attachment of drain pipe or hose.

4. CONDENSER: Rugged tube-in-tube construction. Cooling water circulates around finned copper tubing enclosed in coiled, heavy steel pipe.



5. SAFETY CUT-OUT SWITCH: Hi-Lo Pressure switch protects compressor motor from overload.

6. ELECTRICAL PANEL: Contains wiring terminals and control relays. Conveniently mounted at front of circuit.

7. MOUNTING FRAME: Rigidly constructed of heavy steel channels. Entire circuit, supported by this frame, readily slides in and out of Year 'Round Air Conditioning Unit.

8. HERMETIC COMPRESSOR: Precision constructed within rugged cast iron housing.

9. COMPRESSOR MOUNTINGS: Cushion compressor from operating vibration.

HERMETIC HEAVY-DUTY COMPRESSOR

The entire compressor unit is sealed at the factory. Within the compressor housing is the permanently lubricated, powerful Compressor Motor. This heavy duty motor is cooled with refrigerant gas, so that it performs in excess of its rated horsepower to provide peak performance under heavy loads and to operate more economically under normal loads. Accordingly, this compressor performs with utmost efficiency at all times.

Years Ahead

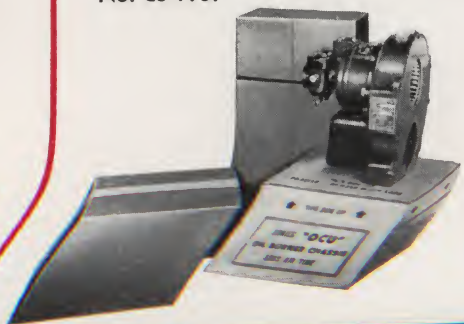
HEATING IS EQUALLY EFFICIENT with OIL BURNER or GAS BURNER

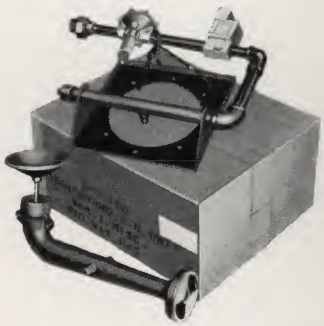
Whether the Year 'Round Air Conditioning Unit is fired with a Gas Burner or Oil Burner, there is no penalty in heating efficiency. The Heavy Gauge Steel Heating element heats equally well with either type of burner.

Conversion from Oil to Gas, or Gas to Oil, is easy, inexpensive and can be performed at any time.

Utmost heating efficiency is assured by the large Rectangular Radiator, which surrounds the upper portion of the combustion chamber and captures every possible Btu of heat from hot combustion gases before they are permitted to enter the flue.

The Pressure Atomizing Oil Burner provides clean, quiet ignition, operates with highest oil burning efficiency, and is easily mounted. This burner is listed by The Underwriters' Laboratories. All models are rated in accordance with the U. S. Dept. of Commerce Commercial Standard, No. CS-195.





When equipped with the Single Port Gas Burner, the Year 'Round Air Conditioning Unit is A. G. A. Approved to burn Natural, Manufactured, Mixed or Liquefied Petroleum Gas. The complete gas burner assembly is packed in a single carton at the factory, is easily assembled to the heating element and provides highest gas burning efficiency.

RATINGS and SPECIFICATIONS

HEATING

	2 H.P. UNITS				3 H.P. UNITS				5 H.P. UNITS	
UNIT NO.	**2-A-100**	**2-0-84**	**2-HC-100**	**2-OHC-84**	**3-A-140**	**3-0-112**	**3-HC-140**	**3-OHC-112**	**5-A-175***	**5-0-140***
Type of Unit	Upflow	Upflow	Counterflow	Counterflow	Upflow	Upflow	Counterflow	Counterflow	Upflow	Upflow
BURNER — Type	Gas	Oil	Gas	Oil	Gas	Oil	Gas	Oil	Gas	Oil
Btu Input	100,000	105,000 (0.75 gal.)	100,000	105,000 (0.75 gal.)	140,000	140,000 (1.00 gal.)	140,000	140,000 (1.00 gal.)	175,000	175,000 (1.25 gal.)
Btu at Bonnet	80,000	84,000	80,000	84,000	112,000	112,000	112,000	112,000	140,000	140,000 (1.00 gal.)
BLOWER — Nominal Cfm at 2/10" Ext. S.P.	800	800	800	800	1200	1200	1200	1200	2000	2000
Blower No.	9-9	9-9	9-9	9-9	10-10	10-10	10-10	10-10	(2) 10-10	(2) 10-10
Drive Combination	3¼ x 6	3¼ x 6	3¼ x 5	3¼ x 5	3¼ x 6	3¼ x 6	3¼ x 6	3¼ x 6	4 ∞ 8	4 x 8
Motor Hp.	¼	¼	¼	¼	⅓	⅓	⅓	⅓	½	½
GAS PIPE — In., NPT (Nat., Mixed and Mfg'd Gas)	¾	—	¾	—	¾	—	¾	—	¾-Nat., 1-Mixed	—
(Liquefied Petroleum Gas)	½	—	½	—	½	—	½	—	½	—
SHIPPING WT. — Approx. Lbs. Unit for Heating Only	404	511	500	603	554	673	606	722	745	873

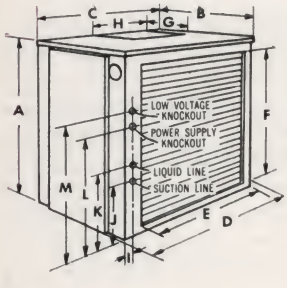
NOTES: Gas Fired Units are A.G.A. Approved for Natural, Manufactured, Mixed or L.P. Gas. Oil Fired Units are Rated according to U. S. Dept. of Commerce CS-195
*Available with reduced Heating Rating. Gas Fired No. 5-A-140 has 140,000 Btu Input and 112,000 Btu at Bonnet. Oil Fired No. 5-0-112 has 140,000 Btu Input (1.00 gal.) and 112,000 Btu at Bonnet.

AIR COOLED CONDENSING (WATERLESS)

CONDENSING UNIT NO.	CA-21	CA-32	CA-52
ELECTRICAL CHARACTERISTICS: Volts — Phase — Cycle*	230-1-60 Only	230-1-60, or 208/220-3-60	230-1-60 or 208/220-3-60
NET COOLING CAPACITY — Btu**	21,200	36,600	57,100
COMPRESSOR — Motor Hp	2	3	5
Motor Rpm	1750	1725	1725
Refrigerant No. & Charge—Lbs.***	12	22	22
CONDENSER — Coil Type	Finned Copper Tube	Finned Copper Tube	Finned Copper Tube
No. of Tube Rows	3	3	3
Coil Face Area — Sq. Ft.	4.5	6.8	8.8
BLOWER — Type	Double Inlet Centrifugal	Double Inlet Centrifugal	Double Inlet Centrifugal
Blower No.	10-10	12-12	(2) 10-10
Nominal Cfm (Free Discharge)	1800	2650	3700
Speed — Rpm	730	670	800
Motor Hp	⅓	½	¾
REFRIGERANT CONNECTIONS — In. O.D.			
Liquid Line (Threaded Flare)	⅜	⅜	½
Suction Line (Swedged End)	⅞	⅞	1⅛
COOLING COIL NO.	CYR-2	CYR-32	CYR-52
Refrigerant Control	Expansion Valve	Expansion Valve	Expansion Valve
Number of Tube Rows	2	3	3
Face Area — Sq. Ft.	2.43	3.3	5.0
Condensate Drain	¾" PT	¾" PT	¾" PT
SHIPPING WT. — Approx. Lbs. Complete Air Cooled Combination Unit	912 / 1019 / 1008 / 1111	1018 / 1137 / 1070 / 1186	1445 / 1573

WATER COOLED CONDENSING

REFRIGERANT UNIT NO.	CW-2	CW-32	RC-552-Y
ELECTRICAL CHARACTERISTICS: Volts - Phase - Cycles*	230-1-60 Only	230-1-60 or 208/220-3-60	230-1-60, or 208/220-3-60
NET COOLING CAPACITY — Btu†	23,500	37,000	62,900
Nominal Capacity — Tons	2	3	5
COMPRESSOR — Motor Hp	2	3	5
Motor Rpm	1750	1725	1725
Refrigerant No.	12	22	22
WATER COOLED CONDENSER — Type	Tube-In-Tube	Tube-In-Tube	Shell and Tube
Intake Connection — In., PT	¾	¾	1
Discharge Connection — In., PT	¾	¾	1
Pressure Drop — Psi. (Without Water Regulating Valve)	5@6 g.p.m.	6@9 g.p.m.	18@15 g.p.m.
COOLING COIL			
Refrigerant Control	Expansion Valve	Expansion Valve	Capillary Tube
Number of Tube Rows	2	3	3
Face Area — Sq. Ft.	2.43	3.47	5.93
Condensate Drain — In., PT	¾	¾	1
SHIPPING WT. — Approx. Lbs. Complete Water Cooled Combination Unit	692 / 799 / 788 / 891	849 / 968 / 901 / 1017	1360 / 1488



OUTLINE DIMENSIONS — AIR COOLED CONDENSING UNITS

UNIT No.	Height A	Width B	Depth C	Overall Depth Incl. Doors D	Condenser Coil E x F
CA-21	32	26¼	38¼	38¾	32½ x 20
CA-32	34½	26¼	38¼	38¾	32½ x 30
CA-52	34½	28¼	47¾	48¼	42 x 30

Discharge Opening G x H	I	J	K	L	M
11⅛ x 12⅞	1-1/16	11¾	7½	16	20¼
13⅛ x 15⅜	1-1/16	11¼	14¼	20⅞	23⅞
(2) 11⅛ x 12⅞ ★	1⅜	3½	6½	11½	16½

★ One Plenum, covering both openings, would be approximately 12 x 38.

NOTES:

* Allowable Voltage Variation for Compressor Motor is plus or minus 10% of voltages shown. Control Circuit is 24 Volt. Voltage unbalanced for Three Phase Motor must not exceed 3%.

** Based on Standard Conditions: 95°F. Ambient Air Temperature, entering Condenser Coil; 80°F. Dry Bulb and 67°F. Wet Bulb Air Temperature, entering Cooling Coil at the C.F.M. indicated.

*** Refrigerant charge depends on installation requirements. See Installation Instructions. Units shipped with oil charge and refrigerant holding charge in compressor.

† A.S.R.E. Standard Rating based on entering air temperature of 80°F db and 67°F wb, entering condenser water temperature of 75°F, and leaving water temperature of 95°F.

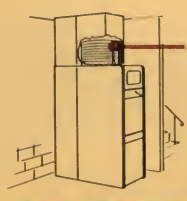
Southaire

No. 290
Supersedes No. 271

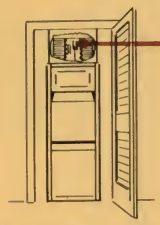
Summer Air Conditioning Systems...

AIR COOLED

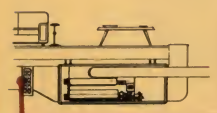
COOLING COILS FOR ADD-ON INSTALLATIONS



Round, Plenum-type Evaporator Coil installed above Basement-type Winter Air Conditioner.

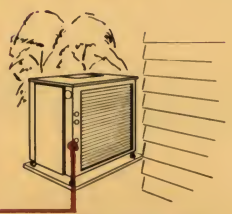


Round, Plenum-type Evaporator Coil installed above Utility-type Furnace, located in a closet.

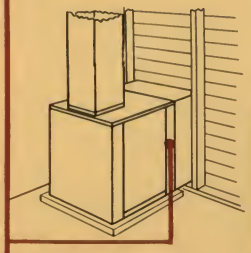


Duct-type Evaporator Coil installed in supply air trunk of Horizontal Furnace.

AIR COOLED CONDENSER COMPRESSOR UNITS



Condenser-Compressor Unit installed outside of building on concrete platform, with Condenser Coil facing wall. Mounting legs can be used when desirable to promote drainage.



Condenser-Compressor Unit installed inside garage. Air is supplied for Condenser Coil through duct leading to outside wall. Air is exhausted through duct leading to roof.

2, 3, 5 H.P.

LISTED BY THE UNDERWRITERS' LABORATORIES

Heavily constructed New Air Cooled Condensing Unit is listed by The Underwriters' Laboratories for installation out-of-doors without additional shelter. Compressor, Condenser Coil, Blower and Motor are contained in the compact, Zinc-coated Steel Cabinet.

New Plenum-type Evaporator Coil is round or oval in shape — more compact and adaptable for installation in plenum chamber above Upflow Winter Air Conditioner.

New Duct-type Evaporator Coil is vertically mounted in enameled steel cabinet—for installation in discharge air duct of Winter Air Conditioner.

E. E. SOUTHER IRON CO.

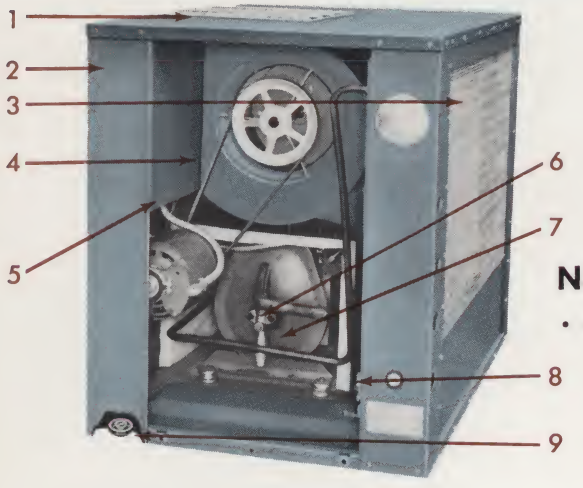
1952 Kienlen Ave. St. Louis 20, Missouri

Southaire Summer Air

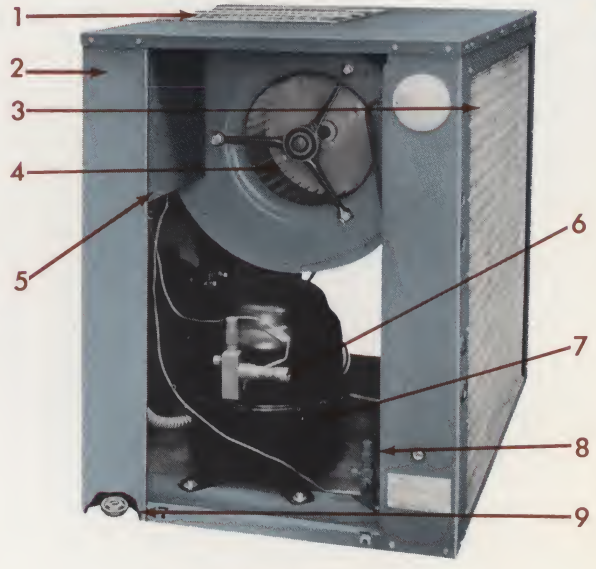
New Air Cooled Condenser – Compressor Units

YEARS AHEAD with Uncomplicated Design... Heavier Construction!

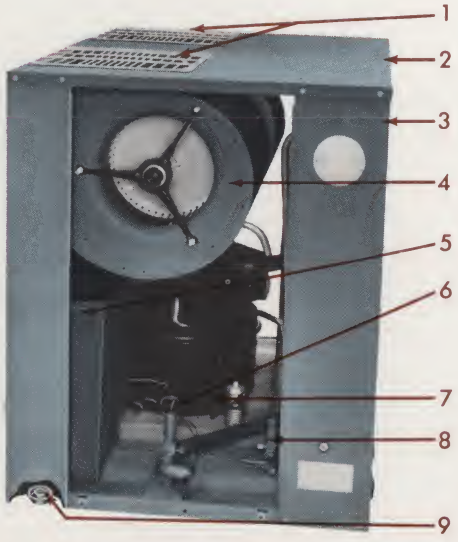
1. **UPWARD AIR EXHAUST** — Discharges away from adjacent buildings, trees or gardens. No. CA-52 has two openings; Nos. CA-21 and CA-32 one. Equipped with protective grille.
2. **WEATHERPROOF CONSTRUCTION** — Zinc-coated 16-gauge Steel Cabinet is heavily coated with baked enamel and has specially designed channels in base for water drainage.
3. **LARGE-AREA CONDENSER COIL** — Provides greater operating efficiency with increased cooling surface and reduced air friction.
4. **CENTRIFUGAL BLOWER** — Operates with greater efficiency than propellor type. Equipped with Ball Bearings. No. CA-52 has two Blowers; Nos. CA-21 and CA-32 have one.
5. **WIRING BOX** — Weather-proof cabinet, which houses electrical controls and wiring terminals, is within easy reach.
6. **SUCTION-LINE VALVE** — Service Valve has Gauge-port and Swedged End for soldered connection.
7. **EXTRA-DUTY COMPRESSOR** — With heavy-duty Refrigerant-cooled Motor. Compressor of Nos. CA-32 and CA-52 are the Sealed Hermetic type. No. CA-21 has the Serviceable Hermetic type. Nos. CA-21 and CA-32 have external mounting springs; No. CA-52 has internal mounting springs.
8. **LIQUID-LINE VALVE** — Charging and Service Valve has Gauge-port and Threaded-flare Connection.
9. **MOUNTING BUSHINGS** — Provide for ¾-inch Pipe Legs.



No. CA-21 ... 2 H.P.



No. CA-32 ... 3 H.P.



No. 52 ...5 H.P.

LISTED BY UNDERWRITERS' FOR OUTDOOR INSTALLATION WITHOUT SHELTER

Conditioning Systems . . . AIR COOLED

New! Unique! Round or Oval Evaporator . . .

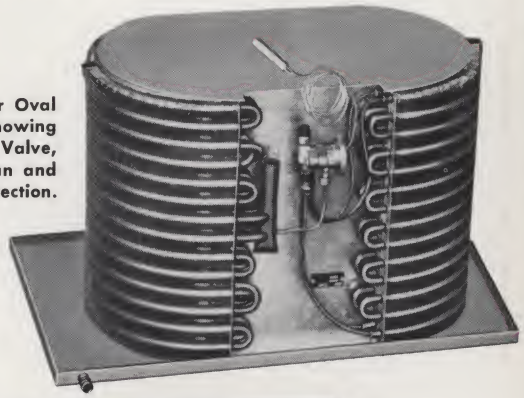
Cooling Coil for Upflow-Plenum Installation!

The distinctive, round design of this new Evaporator Coil saves installation space, while providing unexcelled performance.

This Round Evaporator Coil is low enough so that ample space remains above a high furnace for the proper mixing of the cooling air — plus space for the connection of ducts.

The vertical side walls provide additional cooling area, a more uniform spread of air over the entire cooling surface, and more effective drainage of condensate water.

An Expansion Valve with Threaded-flare Connection, Refrigerant Drier, supporting Condensate Drain Pan and Pipe Thread Drain Connection are supplied as standard equipment.



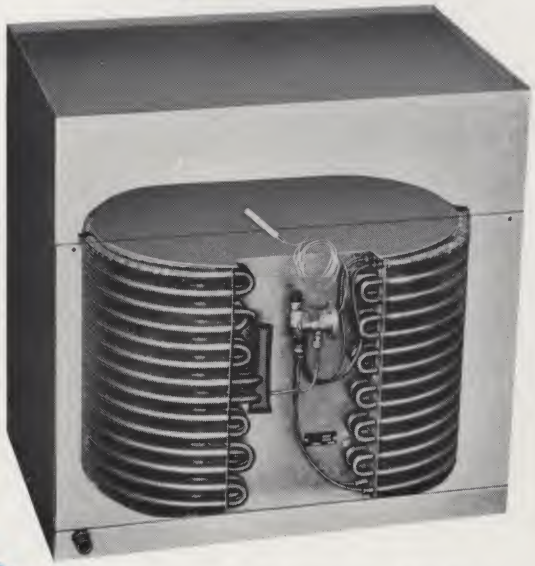
New Round or Oval Evaporator, showing the Expansion Valve, Drain Pan and Drain Connection.

SNAP-LOCK PLENUM FOR ROUND EVAPORATOR COIL

This inexpensive, accessory Plenum makes installation of the new Round Evaporator quick and convenient, and provides exceptional performance in the smallest possible space.

The parts of this Plenum are shipped in a compact carton and are speedily assembled into a sturdy unit by one man. The 30-inch sides provide the needed height for installation in high basements or above low furnaces, yet can be cut to a reduced height when desirable. The supporting base can be enlarged or filled to fit the top opening of virtually any furnace with which the Plenum is used.

Installation of this Plenum for heating only, when the furnace is installed without the Evaporator Coil, provides for the addition of summer cooling at any later date — at a substantial savings!



Round or Oval Evaporator, installed in Accessory Plenum having Access Door for slide-in installation.

COMPACT! ADAPTABLE! DUCT-TYPE EVAPORATOR — COOLING COIL FOR HORIZONTAL-FLOW INSTALLATION!

For installations where the Evaporator is installed in the supply air duct of a Horizontal, Duct or other type of furnace, this Cooling Coil is mounted vertically in a heavily insulated, Enameled Steel Cabinet. Flanges are provided for connection of the ducts.

The cabinet is equipped with a self-contained Condensate Drain Pan and Pipe-thread Connector. An Expansion Valve and Refrigerant Drier are also standard equipment.

Duct type Evaporator, showing the Enameled Casing with Duct Flanges and convenient Access Panel.

Furnace Blower Control Panel

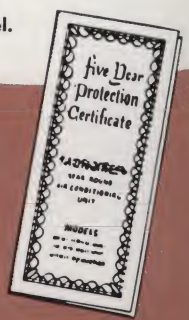
Combination Heating and Cooling Thermostat (An Accessory)

EASILY INSTALLED ELECTRICAL CONTROLS

Wiring of the Thermostat to the Evaporator Control Panel, which is mounted on or near the furnace, is simplified by color-keyed terminals and wires. Only two wires are needed to connect either Unit No. CA-32 or CA-52 to the Control Panel, and three for Unit No. CA-21.

5 YEAR PROTECTION PLAN

All parts of the Series CA Condensing Units, DXO or DXH Cooling Coils and the Electrical System are fully guaranteed against defects of material or workmanship for a year after original installation. After the first year, an Extended Four Year Warranty provides for any necessary repair or replacement of the Refrigerant System — the Compressor, Condenser Coil or Cooling Coil.



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Southaire

AIR COOLED • SUMMER AIR CONDITIONING SYSTEMS

DIMENSIONS—INCHES

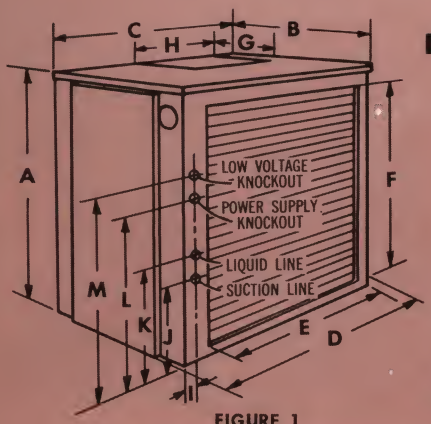


FIGURE 1
SERIES CA CONDENSING UNITS

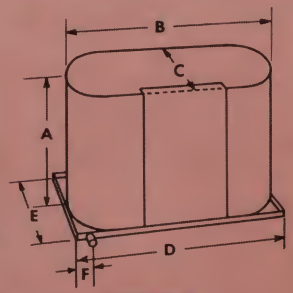


FIGURE 2
SERIES DXO COOLING COIL

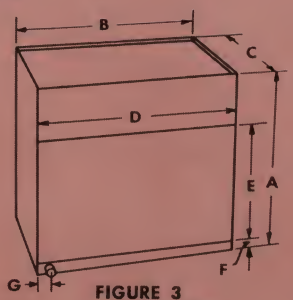


FIGURE 3
PLENUM FOR
SERIES DXO COIL

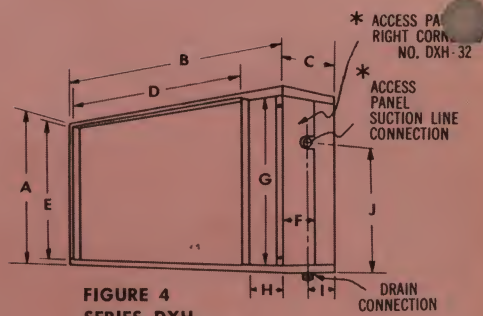


FIGURE 4
SERIES DXH
COOLING COIL

FIGURE 1—SERIES CA—AIR COOLED CONDENSING UNIT

UNIT NO.	Height A	Width B	Depth C	Overall Depth Incl. Doors D	Condenser Coil E x F	Discharge Opening G x H	I	J	K	L	M	Approx. Ship. Wt. Lbs.
CA-21	32	26¼	38¼	38¾	32½ x 20	11⅛ x 12⅞	1-1/16	11¾	7½	16	20¼	450
CA-32	34½	26¼	38¼	38¾	32½ x 30	13⅛ x 15⅜	1-1/16	11¼	14¼	20⅞	23⅞	414
CA-52	34½	28¼	47¾	48¼	42 x 30	(2) 11⅛ x 12⅞★	1⅜	3½	6½	11½	16½	572

★ One Plenum, covering both openings, would be approximately 12 x 38.

SERIES DXO—PLENUM TYPE COOLING COIL

FIGURE 2—DXO COIL AND DRAIN PAN

UNIT NO.	Height A	Width B (Dia.)	Depth C (Dia.)	Width of Drain Pan D	Depth of Drain Pan E	F	Approx. Ship. Wt. Lbs.
DXO-21	12½	15½	15½	17¾	17¾	1¼	25
DXO-32	15	18¼	18¼	21¾	19¾	1¼	40
DXO-52	17½	27	16½	30¾	20¾	1¼	50

FIGURE 3—PLENUM FOR SERIES DXO COIL

Height A	Width B	Depth C	Access Door D x E	F	G	Factory-Cut Plenum Opening	Maximum Furnace Plenum Opening★	Approx. Ship. Wt. Lbs.
30	18	18	18 x 16½	3	1⅜	14 x 16	18 x 18	23
30	22	20	22 x 16½	3	1⅜	16 x 16	22 x 20	30
30	32	21	32 x 19	3	1⅜	16 x 22	32 x 21	39

★ Without Transition.

FIGURE 4—SERIES DXH—DUCT TYPE COOLING COIL

UNIT NO.	Height A	Width B	Depth C	Duct Connection D x E	Access Opening F x G	H	I	J	Approx. Ship. Wt. Lbs.
DXH-2	13½	34¾	10	11⅛ x 26⅜	7 x 9¼	4⅛	5	3⅛	69
DXH-32	21¾	31	10	20 x 24	5⅝ x 19¾	5⅝	5	8	58
DXH-52	21¾	43	10	20 x 36	5¼ x 19¾	5	5	15¼	85

RATINGS AND SPECIFICATIONS

NOS. CA-21, CA-32 AND CA-52—AIR COOLED CONDENSING UNIT

UNIT NO.	CA-21	CA-32	CA-52
COOLING CAPACITY — Btu/Hr.			
90°F. Ambient Air Temperature:			
45°F. Coil Temperature	22,600	38,200	62,500
40°F. Coil Temperature	20,700★	35,500★	56,100★
95°F. Ambient Air Temperature:			
45°F. Coil Temperature	21,500	36,850	59,700
40°F. Coil Temperature	19,600	34,150	53,500
COMPRESSOR			
Type	Ser. Her.	Sealed Her.	Sealed Her.
Motor H.P.	2	3	5
Speed — R.P.M.	1750	1725	1725
Electrical Characteristics†			
Volts — Phase — Cycles	230-1-60 ONLY	230-1-60 or 208/220-3-60	230-1-60 or 208/220-3-60
REFRIGERANT TYPE NO.★★★	12	22	22
CONDENSER COIL			
Type	— Finned Copper Tube —		
No. of Tube Rows	3	3	3
Face Area — Sq. Ft.	4.5	6.8	8.8
Air Flow	— Pull Through —		
CONDENSER BLOWER			
Type	— Double Inlet Centrifugal —		
Blower No.	10-10	12-12	(2) 10-10
Blower Motor H.P.	⅓	½	¾
Electrical Characteristics†	230-1-60	230-1-60	230-1-60
Wheel Dia. — In.	10⅝	12⅝	(2) 10⅝
Nominal C.F.M. (Free Discharge)	1800	2650	3700
Speed — R.P.M.	730	670	800
REFRIGERANT CONNECTIONS — In. O.D.			
Liquid Line (Threaded Flare)	⅜	⅜	½
Suction Line (Swedged End)	⅞	⅞	1⅛

SERIES DXO—ROUND OR OVAL—PLENUM TYPE—UPFLOW

UNIT NO.	DXO-21	DXO-32	DXO-52
★★COOLING CAPACITY With Series CA Condensing Unit — Btu/Hr./C.F.M.	21,800/800	36,800/1200	55,200/1750
Refrigerant Type No.	12	22	22
No. of Tube Rows	2	2	2
Face Area — Sq. Ft.	3.1	5.0	6.8
Static Resist. — C.F.M./In. W.G.			
Wet Coil	800/0.24	1200/0.25	1750/0.30
Dry Coil	800/0.21	1200/0.22	1750/0.26
Refrigerant Connections—In O.D.			
Liquid Line (Threaded Flare)	⅜	⅜	½
Suction Line (Swedged End)	⅞	⅞	1⅛
Condensate Drain — In. M.P.T.	¾	¾	¾

SERIES DXH—FLAT—DUCT TYPE—HORIZONTAL FLOW

UNIT NO.	DXH-2	DXH-32	DXH-52
★★COOLING CAPACITY With Series CA Condensing Unit — Btu/Hr./C.F.M.	21,800/800	36,600/1200	57,100/2000
Refrigerant Type No.	12	22	22
No. of Tube Rows	3	3	3
Face Area — Sq. Ft.	2.4	3.3	5.0
Static Resist. — C.F.M./In. W.G.			
Wet Coil	800/0.19	1200/0.23	2000/0.26
Dry Coil	800/0.12	1200/0.13	2000/0.12
Refrigerant Connections—In O.D.			
Liquid Line (Threaded Flare)	⅜★	⅜	½
Suction Line (Swedged End)	⅞	⅞	1⅛
Condensate Drain — In. M.P.T.	¾	¾	¾

★ No. DXH-2 has tubing connection.

* Based on Calorimeter Tests in accordance with A.S.R.E. Standard #14-41, Group #8.

** Based on Standard Conditions: 95°F. Ambient Air Temperature, entering Condenser Coil; 80°F. Dry Bulb and 67°F. Wet Bulb Air Temperature, entering Cooling Coil at the C.F.M. indicated.

*** Refrigerant Charge depends on installation requirements. See Installation Instructions. Units shipped with Oil Charge and Holding Charge of Refrigerant in Compressor.

† Allowable Voltage Variation for Compressor Motor is plus or minus 10% of voltages shown. Control Circuit is 24 Volt. Voltage unbalanced for Three Phase Motor must not exceed 3%.

Southaire

Blower-Cooling Coil Units

Compact Air Handling Units . . . for Commercial, Industrial or Residential Cooling...with 3 or 5 H.P. Air Cooled Condensing Units

In air conditioning installations — wherever it is desirable to combine the Air Distribution Blower and Filter with the Evaporator Coil in a single, compact package — the Blower-Coil Unit affords utmost installation flexibility, plus superior performance.

For summer air conditioning, this compact Air Handling Unit is shipped ready for installation in connection with a duct system.

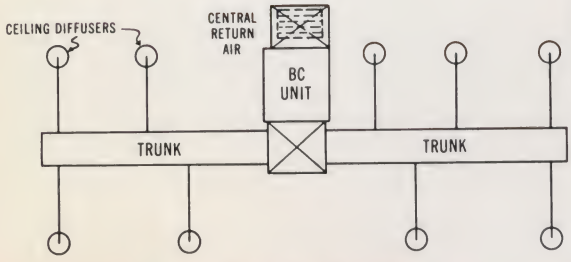
In addition, this unit is available with Intake and Discharge Plenum-Grilles for air intake directly from and discharge directly into the air conditioned space. (Available as accessories at additional cost.)

In a year 'round air conditioning system — where it is not desirable to utilize the furnace blower for distribution of both heated and cooled air — the Blower-Coil Unit becomes an excellent Add-On Cooling Unit that provides separate distribution of the cooling air.

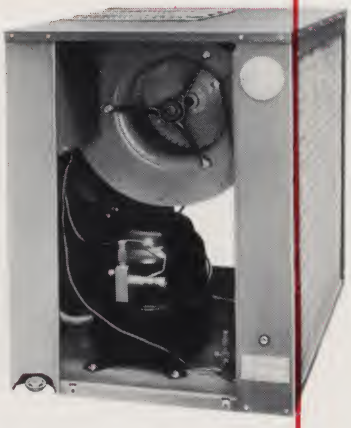
Ruggedly constructed, this Blower-Coil Unit has Heavy Gauge Steel Cabinet attractively finished with charcoal grey baked enamel.

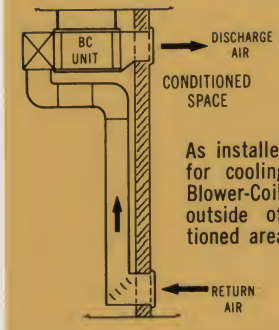
Above, the Blower-Coil Unit is pictured with Intake and Discharge Plenum-Grilles installed. (Accessories, available at additional cost.)

Below, the remotely installed Series CA, Air Cooled Condensing Unit, houses the Compressor, Condenser Coil, Condenser Blower and Motor in a compact, weatherproof, Zinc Coated 16-Gauge Steel Cabinet . . . Listed by The Underwriters' Laboratories for unsheltered outdoor installation . . . Rugged and uncomplicated for peak performance!

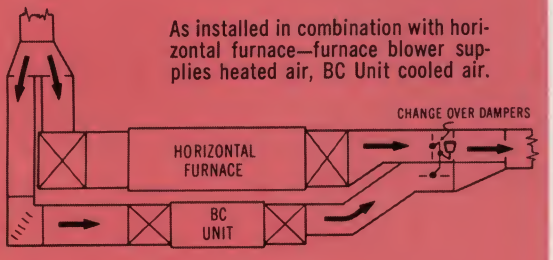


As installed in attic for cooling only, with ducts leading to ceiling diffusers.

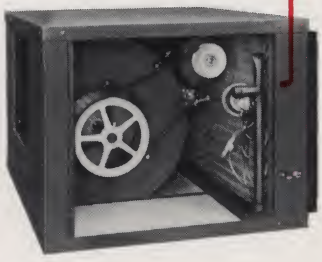




As installed with ducts for cooling only, with Blower-Coil Unit located outside of air conditioned area.



As installed in combination with horizontal furnace—furnace blower supplies heated air, BC Unit cooled air.



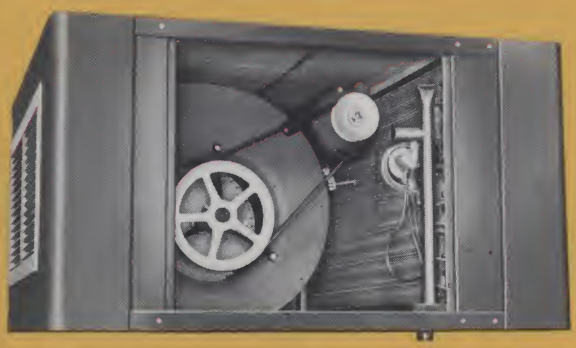
Blower-Coil Unit, as shipped from the factory, ready for connection of air intake and discharge ducts.

As installed with Plenum-Grilles for air intake and discharge directly into the room. (Accessories.)

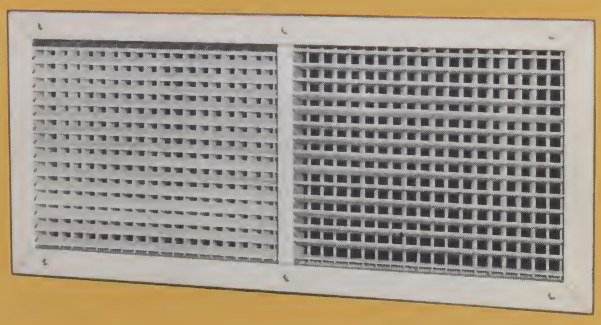
E. E. SOUTHER IRON CO.

1952 Kienlen Ave. **St. Louis 20, Missouri**

Southaire BLOWER AND COOLING COIL UNITS

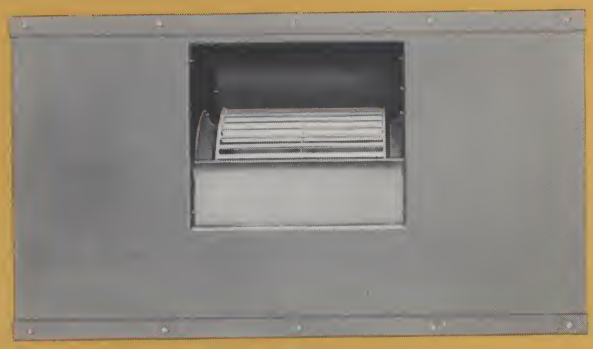


Unit is shown with Accessory Intake and Discharge Plenum-Grilles installed. Convenient Side Access Door is removed to show compact arrangement of interior construction. Access Doors are provided on both sides.



Accessory, Twin Discharge Grilles of No. BC-52 showing how the vanes are easily adjusted to disperse cooling air in virtually any direction. Grille for No. BC-32 has same adjustability but has single construction.

Rear view of No. BC-52 showing Filter Frame with convenient slide-out arrangement for Filters from one, or from either Side. No. BC-32 is equipped with a single Filter. An Intake Duct can readily be connected at this end.



Front view of Unit showing Blower Discharge Opening. A Discharge Duct can readily be connected at this opening.

RATINGS AND SPECIFICATIONS

RATINGS

Unit No.	Refrigerant Type No.	Cooling Capacity with Series CA Condensing Unit		Approx. Ship. Wt.—Lbs.		
				BC Unit Only	Acc. Plenum-Grille	
		Btu/Hr.*	C.F.M. at Rating		Intake	Discharge
BC-32	22	34,000	1200	190	22	27
BC-52	22	55,300	2000	270	28	34

*Net Capacity: Heat generated by Blower Motor is deducted. Standard Conditions: 80°F. D.B. and 67°F. W.B. air entering Cooling Coil at the C.F.M. indicated and 95°F. outdoor air.

COIL SPECIFICATIONS

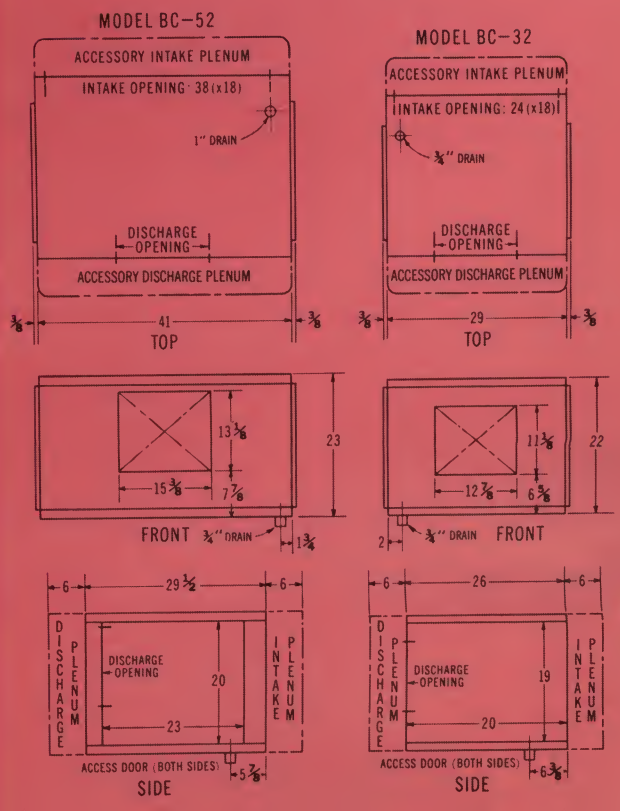
Unit No.	No. of Tube Rows	Face Area Sq. Ft.	Refrigerant Connections—In. O.D.		Condensate Drain In. F.P.T.
			Liquid Line (Threaded Flare)	Suction Line (Swedged End)	
BC-32	3	3.3	3/8	7/8	3/4
BC-52	3	5.0	1/2	1 1/8	3/4

BLOWER SPECIFICATIONS

Unit No.	Blower No.	Blower Drive Type	Blower Motor H.P.	Electrical Characteristics	Available Air Delivery—C.F.M. at 0.20" W.G.—E.S.P.*
BC-32	10-10	Belt	1/3	115/1/60	1200
BC-52	12-12	Belt	1/2	115/1/60	2000

*Adjusted to provide Air Delivery at 400 C.F.M. per Ton of Cooling. Motor Pulley can be adjusted to vary the Blower Speed, when necessary.

DIMENSIONS – INCHES



Southaire

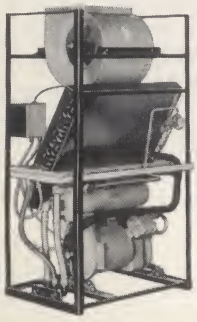
WATER COOLED Summer Air Conditioners

The Three Ton Unit without a Blower for air circulation is No. 311-W, for which the air circulation is provided by the Furnace Blower. Except for the lack of the Blower, No. 311-W is the same unit, with the same Cooling Circuit, as No. H-311-W, shown at right.

Three Ton Unit No. H-311-W, without Cabinet, showing Cooling Circuit, Blower and Motor mounted on sturdy steel frame. Holes, punched in frame, make it possible to mount Blower to discharge from either the top, where an opening is provided, or from the right side of cabinet, where "knock-outs" provide cutting guide for opening.

Three Ton Unit No. H-311-W with its compact cabinet installed, illustrating the Side Air Intake with Pull-Out Filter. Return air is drawn across the filter and through the Cooling Coil.

Five Ton Unit No. H-511-W, viewed from the front. This unit is unusually compact in relation to its high capacity. This complete air conditioner is shipped with all cabinet panels assembled.



Five Ton Unit No. 511-W with cabinet panels removed, showing how the heavy steel frame completely supports all weight of the Cooling Circuit, Blower and Motor.

Five Ton No. H-511-W with Filter Rack (an accessory) installed at the rear. The return air plenum can be connected to either the back or the top of this rack. A bottom return air opening is also provided in the cabinet base.

3 and 5 Ton Self-Contained Units . . . for Year 'Round Air Conditioning Conversions . . . and Summer Air Conditioning of Offices and Stores

A Single Unit that is Flexible and Quick to Install . . . for Air Conditioning One Room . . . Several Rooms . . . or an Entire Home . . .

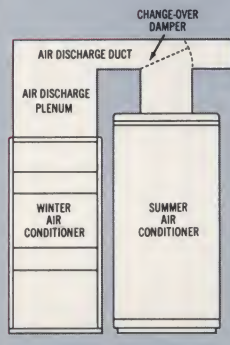
A complete, compact refrigeration system, contained in one attractive cabinet, the Water Cooled Summer Air Conditioner requires connection only to water supply, drain, electrical supply and ducts for speedy installation.

When added to an existing or a new forced air furnace and attached to the same return and discharge air ducts, the Summer Air Conditioner affords unsurpassed summer cooling for every room, which is also heated in winter.

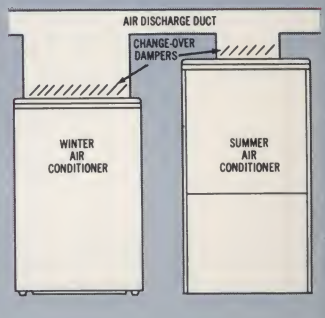
In an office or store, which is a relatively compact, single room, installation of a short duct elbow on the discharge opening permits distribution of the cooling air directly from the Summer Air Conditioner. Where the office or store is a longer or larger room, or consists of more than one room, a system of ducts is installed to transmit the cooling air to diffusers.

Wherever it is installed, the Summer Air Conditioner responds to a touch of the thermostat to lower air temperature to the level desired, while removing excess moisture or humidity from the circulating air. Efficient filters screen out most dust, soot, and pollens carried in the air. The resulting cool air is both comfortably dry and free of dirt or airborne irritants.

Example "Add-On" Applications



Sketch, at left, shows Three Ton Unit No. H-311-W as installed to operate with a forced air furnace. A Change-Over Damper is installed to switch from cooling to heating, or visa versa. Each unit provides its own air circulation with its own Blower.



Sketch, at right, illustrates Five Ton Unit No. H-511-W as installed with basement-type forced air furnace. Fluted dampers make the change-over from heating to cooling or visa versa.

THE WATER COOLED SUMMER AIR CONDITIONER

. . . with Unexcelled Design . . . Construction . . . Performance Features

Charged and Sealed at the Factory

No on-the-job charging or complicated adjustment is required for the Cooling Circuit of this Air Conditioner. Only connection to the water supply, drain, electrical supply, and ducts is required for installation.

Rigid Steel Mounting Frame

The complete weight of the Cooling Circuit, Blower and Motor, and Cabinet is supported by a heavy steel frame. No operating part is supported by the cabinet, which is heavily insulated against transfer of heat or noise with thick layers of glass fiber.

Fin-Tube Condenser Coil

Aluminum fins on seamless copper tubing provide maximum transfer of heat from the hot Freon gas to circulating water. In Unit No. H-511-W, these fin-tubes are contained within a heavy steel vessel. In Unit Nos. 311-W and H-311-W, they are coiled within heavy steel pipe.

Large-Capacity Blower

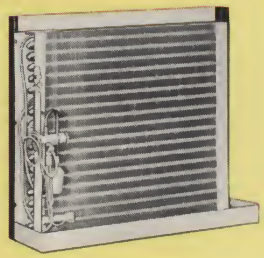
The Centrifugal Blower is of ample size so that plentiful air circulation, without the need for excess speed, provides quiet operation.

Large-Area Filters

Extra large filter area offers low resistance to air flow, with greater screening area. Filters are of standard size for convenient replacement.

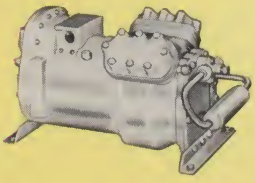
Liberal Protection Plan

Extra quality and durability make possible a Five Year Protection Plan which is among the most liberal available. All parts are guaranteed against defects of material or workmanship for a full year. Following the first year, an Extended Four Year Warranty provides for any necessary repair of the complete Refrigeration Circuit — the Compressor, Condenser and Cooling Coil.



Large-Area Cooling Coil

The Cooling Coil is constructed of seamless copper tubing, with multiple aluminum fins which resist corrosion. It is equipped with a trouble-free Expansion Valve, which automatically measures the correct amount of liquid Freon to the Cooling Coil, in relation to the temperature of the air drawn through the coil.



Heavy-Duty Compressor

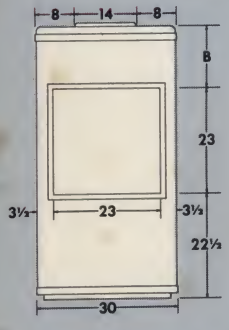
The Compressor is the Accessible Hermetic type, which is sealed at the factory but permits field service or repair of pistons, valves or other moving parts, if ever necessary. This Compressor, like the finest automobile engines, has V-type construction within a precision-machined cast iron block.

Automatic Temperature Control

The Combination Heating and Cooling Thermostat automatically regulates air temperature to the desired setting. A convenient switch, located on the thermostat, provides for manual resetting of the High-Low Pressure Cut-Out Switch and Thermal Overload Relays, which protect the Compressor Motor.

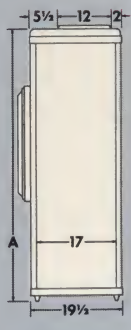
DIMENSIONS-INCHES

Nos. 311-W and H-311-W

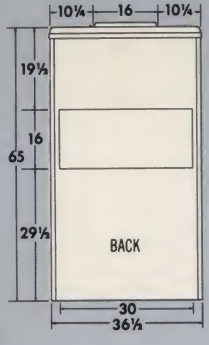


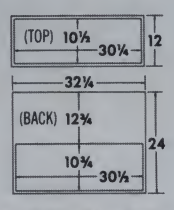
Unit No.	A	B
311-W	49	3-1/2
H-311-W	58-3/4	13-1/4

Filter Size —
No. H-311-W:
(1) 25x25x1

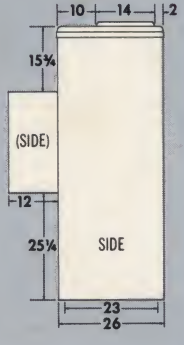


No. H-511-W





ACCESSORY REAR AIR INTAKE AND FILTER RACK



Filter Size: (2) 16x25x1

SPECIFICATIONS

UNIT NO.	311-W	H-311-W	H-511-W
ELECTRICAL CHARACTERISTICS ★ Volts — Phase — Cycles	230-1-60 or 208/220-3-60		
NET COOLING CAPACITY — Btu ★★ Nominal Capacity — Tons	37,400 3	37,400 3	60,000 5
COMPRESSOR-Type No. of Cylinders Bore x Stroke — Inches Motor Horsepower Speed — R.P.M. Oil Charge — Pints	CLS-31 2 2x1½ 3 1750 2½	CLS-31 2 2x1½ 3 1750 2½	CSL-51 2 2⅜x2⅛ 5 1750 3
REFRIGERANT-Type Charge — Lbs.	F-22 3	F-22 3	F-12 11
WATER COOLED CONDENSER-Type Pressure Drop — P.S.I./G.P.M. Condenser Water Connections ★★★	Tube-in-Tube 1.75/4.5 ¾" F.P.T.	Tube-in-Tube 1.75/4.5 ¾" F.P.T.	Shell and Tube 2.0/7.5 1" F.P.T.
COOLING COIL-Type No. of Tube Rows Face Area — Sq. Ft. Condensate Drain	 2 3.47 ¾" M.P.T.	Direct Expansion 2 3.47 ¾" M.P.T.	 3 3.98 ¾" F.P.T.
BLOWER-Type Wheel Diam. — Inches Wheel Pulley Diam. — Inches Belt Length — Inches Motor Horsepower Motor Pulley Diam. — Inches Motor R.P.M. C.F.M./External Static Pres.	NONE	Double Inlet 10⅝ 6x¾ 39 ⅓ 3x½ 1725 1200/0.25"	Centrifugal 12⅝ 8x¾ 54 ½ 4x⅝ 1725 2000/0.25"
Approximate Shipping Wt. — Lbs.	474	539	780

★ Allowable voltage variation on all compressor motors is plus or minus 10 percent of voltages shown. Voltage unbalance on three phase must not exceed 3%.

★★ A. S. R. E. Standard Rating based on entering air temperature of 80 F db and 67 F wb, entering condenser water temperature at 75 F, and leaving water temperature at 95 F.

★★★ All units are shipped with condenser connected for water tower application, easily adaptable for city water use by addition of accessory water regulating valve.

DEALERS' NET PRICE LIST

SUREFIT SNAP LOCK PLENUMS

FOR

Southaire

WARM AIR HEATING UNITS

Effective January 2, 1958

Prices and Terms are Subject to Change Without Notice]

TERMS AND OTHER CONDITIONS

TERMS

Terms—2% cash discount for payment 10th of month following shipment—net end of month following shipment.

Cash discount to be taken from net amount of invoice—no discount allowed on freight.

FREIGHT ALLOWANCES

Prices are f.o.b. factory, subject to the following freight allowances EXCEPT where specifically stated that no freight allowance applies.

Less than Carload Shipments—Actual regular rail rate (not collect and deliver rate) of freight from factory allowed up to but not exceeding 50c per cwt.

Carload Shipments—Actual regular rail rate of freight, including Federal taxes levied on freight charges allowed—except that truck rate, if lower, will be allowed in case of truckload shipments—to all points east of the eastern boundaries of North Dakota, South Dakota, Nebraska, and Kansas, and north of the southern boundaries of Missouri, Kentucky, and Virginia, including all towns on such boundary lines. To points beyond these boundaries, the actual carload freight rate to the boundary line will be allowed.

Federal or other taxes levied on freight charges are not included in the Freight Allowances made on less than Carload or less than Truckload Shipments.

In no event is more than the actual freight charge allowed.

Freight allowance does not apply to shipments of repairs or accessories

ACCEPTANCE OF ORDERS

All orders are accepted conditioned upon fires, floods, strikes, accidents, and conditions beyond our control.

All orders are accepted on the condition that the price in effect at the time of shipment applies.

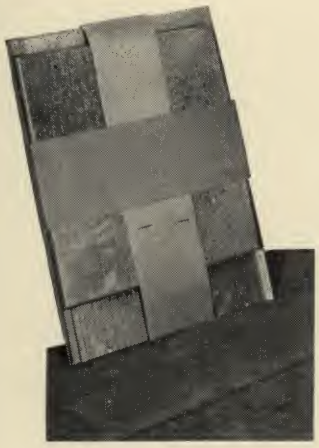
CLAIMS

The responsibility of this company ceases upon delivery of goods, in good order to transportation company. If shipment is offered to purchaser by transportation company in bad order, purchaser should require that transportation company's agent make notation of damage or shortage on paid freight bill, thereby enabling purchaser to secure prompt payment of claim. Concealed damage should be reported immediately to transportation company, allowing them to make inspection and necessary notation on freight bill.

TAXES

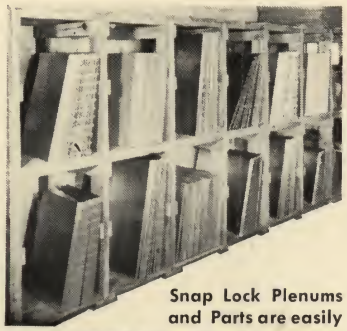
To the prices and terms quoted add any manufacturers' or sales tax payable under any effective statute.

SUREFIT SNAP LOCK PLENUMS



At left, Snap Lock Plenum parts as packaged for compact shipment. The five pieces are strapped together and padded with corrugated board. Each plenum is plainly marked for ready identification.

As shown at right, Snap Lock Plenums are easily and speedily assembled. The five pieces are readily snapped together without the necessity of special tools, screws or bolts.



Snap Lock Plenums and Parts are easily and conveniently stored on compact shelves. Each piece is clearly marked for easy identification.

NUMBERS, INTERCHANGEABLE SIZES AND NET DEALER PRICES

Size	Plenum 24" High	Net Dealer Price	Plenum 30" High	Net Dealer Price	Plenum 36" High	Net Dealer Price	Unit Nos.					
12x16	#13A	2.69	#13B	3.23	#13C	3.76	SHC75-W	SHC75-B				
12x18	#14A	2.88	#14B	3.46	#14C	4.03	SH75-R					
14x14	#22A	2.69	#22B	3.23	#22C	3.76	SH75-C					
14x16	#23A	2.88	#23B	3.46	#23C	4.03	SH75-W	SH100-C	SHC75-R	SHC100-W	SHC100-B	HOC79-W
												HOC79-B
14x18	#24A	3.07	#24B	3.69	#24C	4.30	A105E-R	O71E-R	A105-R	O71-R	HO79-W	HO79-C
												HOC79-R
14x20	#25A	3.26	#25B	3.92	#25C	4.57	SH125-C					
14x22	#26A	3.46	#26B	4.15	#26C	4.84	SH100-R	HO79-R	HO112-C			
14x24	#27A	3.65	#27B	4.38	#27C	5.11	SH100-S	SH150-B	HO79-S			
16x16	#33A	3.07	#33B	3.69	#33C	4.30	SH100-W	SHC100-R				
16x18	#34A	3.26	#34B	3.92	#34C	4.57	SHC125-W	SHC125-B	A105E-W	O71E-W	A105-W	O71-W
									Y80E-W	Y80E-R	D80-W	D80-R
16x20	#35A	3.46	#35B	4.15	#35C	4.84	SH125-W	SHC125-R				
16x22	#36A	3.65	#36B	4.38	#36C	5.11	SHC150-W	SHC150-B	A125E-R	O86E-R	A125-R	O86-R
16x24	#37A	3.84	#37B	4.61	#37C	5.38	SH150-W					
18x18	#44A	3.46	#44B	4.15	#44C	4.84	H100E-W	OH85E-W	H100E-R	OH85E-R	HC100E-R	OHC85E-R
							Y100E-W	Y100E-R	D100-W	D100-R	OY85E-W	OY85E-R
												A10-R
18x22	#46A	3.84	#46B	4.61	#46C	5.38	SH125-R	A150-R	O114-R	Y120E-R	HO112-R	
18x24	#47A	4.03	#47B	4.84	#47C	5.64	SH125-S	SHC150-R	H115E-S	OH101E-S	H140E-S	OH123E-S
									Y140E-R	HO112-R	AC722F-R	A12-R
20x22	#56A	4.03	#56B	4.84	#56C	5.64	A125E-W	O86E-W	A125-W	O86-W	H115E-R	OH101E-R
							H140E-R	OH123E-R	Y120E-W	D120-W	D120-R	HO112-W
20x24	#57A	4.22	#57B	5.07	#57C	5.91	Y140E-W	D140-W	D140-R			
20x30	#510A	4.80	#510B	5.76	#510C	6.72	AC724F-R	AC727F-R				
22x22	#66A	4.22	#66B	5.07	#66C	5.91	SH150-R	A150-W	O114-W	H115E-W	OH101E-W	H140E-W
							OH123E-W	HC115E-W	OHC101E-W	HC115E-R	OHC101E-R	HC115E-B
							OHC101E-B	HC140E-W	OHC123E-W	HC140E-R	OHC123E-R	OY101E-W
											OY101E-R	OY123E-W
22x34	#612A	5.38	#612B	6.45	#612C	7.53	G110-W	OG72-W				
24x24	#77A	4.61	#77B	5.53	#77C	6.45	SH150-S	OY123E-R	AC722F-W			
24x32	#711A	5.38	#711B	6.45	#711C	7.53	A210-R	O158-R	A260-R	O192-R		
26x26	#88A	4.99	#88B	5.99	#88C	6.99	G86-W					
26x42	#816A	6.53	#816B	7.83	#816C	9.14	G135-W	OG98-W				
28x28	#99A	5.38	#99B	6.45	#99C	7.53	OY224E-W	OY224E-R				
30x30	#1010A	5.76	#1010B	6.91	#1010C	8.06	AC724F-W	AC727F-W				
32x32	#1111A	6.14	#1111B	7.37	#1111C	8.60	A210-W	O158-W	A260-W	O192-W		
17x17	------	3.26	------	3.92	------	4.57	H100E-S	OH85E-S	HC100E-W	OHC85E-W	HC100E-B	OHC85E-B
23x23	------	4.42	------	5.30	------	6.18	HC140E-B	OHC123E-B				

KEY: W = Warm Air; R = Return Air; C = Return Air to Accessory Return Air Cabinet; S = Return Air to Side Air Intake; B = Warm Air, with Base for Combustible Floor

SUREFIT SNAP LOCK PLENUMS
NET DEALER PRICES BY UNIT NUMBER

Unit No.	Plenum No.	Size — Inches	Net Dealer Price	Plenum No.	Size — Inches	Net Dealer Price	Plenum No.	Size — Inches	Net Dealer Price	Plenum No.	Size — Inches	Net Dealer Price
	W — Warm Air			R — Return Air			S — Return Air (Side)			C — Return Air (Cabinet)		
SH-75	#23A	14x16	2.88	#14A	12x18	2.88	#24A	14x18	3.07	#22A	14x14	2.69
SH-100	#33A	16x16	3.07	#26A	14x22	3.46	#27A	14x24	3.65	#23A	14x16	2.88
SH-125	#35A	16x20	3.46	#46A	18x22	3.84	#47A	18x24	4.03	#25A	14x20	3.26
SH-150	#37A	16x24	3.84	#66A	22x22	4.22	#77A	24x24	4.61	#27A	14x24	3.65
	W — Warm Air			R — Return Air						B — Warm Air (With Base For Combustible Floor)		
SHC-75	#13A	12x16	2.69	#23A	14x16	2.88	....	.....	....	#13A	12x16	2.69
SHC-100	#23A	14x16	2.88	#33A	16x16	3.07	....	.....	....	#23A	14x16	2.88
SHC-125	#34A	16x18	3.26	#35A	16x20	3.46	....	.....	....	#34A	16x18	3.26
SHC-150	#36A	16x22	3.65	#47A	18x24	4.03	....	.....	....	#36A	16x22	3.65
	W — Warm Air			R — Return Air								
A-105-E——O-71-E	#34A	16x18	3.26	#24A	14x18	3.07	....	.....	....	....	.....	....
A-105———O-71	#34A	16x18	3.26	#24A	14x18	3.07	....	.....	....	....	.....	....
A-125-E——O-86-E	#56A	20x22	4.03	#36A	16x22	3.65	....	.....	....	....	.....	....
A-125———O-86	#56A	20x22	4.03	#36A	16x22	3.65	....	.....	....	....	.....	....
A-150———O-114	#66A	22x22	4.22	#46A	18x22	3.84	....	.....	....	....	.....	....
A-210———O-158	#1111A	32x32	6.14	#711A	24x32	5.38	....	.....	....	....	.....	....
A-260———O-192	#1111A	32x32	6.14	#711A	24x32	5.38	....	.....	....	....	.....	....
	W — Warm Air			R — Return Air			S — Return Air (Side)					
H-100-E——OH-85-E	#44A	18x18	3.46	#44A	18x18	3.46	....	17x17	3.26	....	.....	....
H-115-E——OH-101-E	#66A	22x22	4.22	#56A	20x22	4.03	#47A	18x24	4.03	....	.....	....
H-140-E——OH-123-E	#66A	22x22	4.22	#56A	20x22	4.03	#47A	18x24	4.03	....	.....	....
	W — Warm Air			R — Return Air						B — Warm Air (With Base For Combustible Floor)		
HC-100-E—OHC-85-E	....	17x17	3.26	#44A	18x18	3.46	....	.....	....	....	17x17	3.26
HC-115-E—OHC-101-E	#66A	22x22	4.22	#66A	22x22	4.22	....	.....	....	#66A	22x22	4.22
HC-140-E—OHC-123-E	#66A	22x22	4.22	#66A	22x22	4.22	....	.....	....	....	23x23	4.42
	W — Warm Air			R — Return Air								
Y-80-E	#34A	16x18	3.26	#34A	16x18	3.26	....	.....	....	....	.....	....
Y-100-E	#44A	18x18	3.46	#44A	18x18	3.46	....	.....	....	....	.....	....
Y-120-E	#56A	20x22	4.03	#46A	18x22	3.84	....	.....	....	....	.....	....
Y-140-E	#57A	20x24	4.22	#47A	18x24	4.03	....	.....	....	....	.....	....
	W — Warm Air			R — Return Air								
D-80	#34A	16x18	3.26	#34A	16x18	3.26	....	.....	....	....	.....	....
D-100	#44A	18x18	3.46	#44A	18x18	3.46	....	.....	....	....	.....	....
D-120	#56A	20x22	4.03	#56A	20x22	4.03	....	.....	....	....	.....	....
D-140	#57A	20x24	4.22	#57A	20x24	4.22	....	.....	....	....	.....	....
	W — Warm Air			Return Air								
G-86	#88A	26x26	4.99	Cut on job			....	.....	....	....	.....	....
G-110———OG-72	#612A	22x34	5.38	Cut on job			....	.....	....	....	.....	....
G-135———OG-98	#816A	26x42	6.53	Cut on job			....	.....	....	....	.....	....
	W — Warm Air			R — Return Air			S — Return Air (Side)			C — Return Air (Cabinet)		
HO-79	#24A	14x18	3.07	#26A	14x22	3.46	#27A	14x24	3.65	#24A	14x18	3.07
HO-112	#56A	20x22	4.03	#46A	18x22	3.84	#47A	18x24	4.03	#26A	14x22	3.46
	W — Warm Air			R — Return Air						B — Warm Air (With Base For Combustible Floor)		
HOC-79	#23A	14x16	2.88	#24A	14x18	3.07	....	.....	....	#23A	14x16	2.88
	W — Warm Air			R — Return Air								
OY-85-E	#44A	18x18	3.46	#44A	18x18	3.46	....	.....	....	....	.....	....
OY-101-E	#66A	22x22	4.22	#66A	22x22	4.22	....	.....	....	....	.....	....
OY-123-E	#66A	22x22	4.22	#77A	24x24	4.61	....	.....	....	....	.....	....
OY-224-E	#99A	28x28	5.38	#99A	28x28	5.38	....	.....	....	....	.....	....
	W — Warm Air			R — Return Air								
AC-722-F	#77A	24x24	4.61	#47A	18x24	4.03	....	.....	....	....	.....	....
AC-724-F	#1010A	30x30	5.76	#510A	20x30	4.80	....	.....	....	....	.....	....
AC-727-F	#1010A	30x30	5.76	#510A	20x30	4.80	....	.....	....	....	.....	....
	W — Warm Air			R — Return Air								
A-10	None used			#44A	18x18	3.46	....	.....	....	....	.....	....
A-12	None used			#47A	18x24	4.03	....	.....	....	....	.....	....

NOTES:

(1) All above Net Dealer Prices are for plenums 24" high and bear the suffix A.
- For plenums 30" high add 20% to the trade price and use the letter B.
- For plenums 36" high add 40% to the trade price and use the letter C.
- For plenums 42" high add 60% to the trade price and use the letter D.
- For plenums 48" high add 80% to the trade price and use the letter E.

(2) All furnaces with the same Unit No. designation use the same plenum size. For units with the suffix "D," which are equipped with Direct Drive Blower, there is no change in plenum size. For example, Unit Nos. SH-100 and SH-100-D both use the same #33 Warm Air Plenum.

SUREFIT SNAP LOCK PLENUMS

NET DEALER PRICES FOR ORDERING COMPLETE PLENUMS

Size	24" High		30" High		36" High	
12x12	#11A	2.30	#11B	2.76	#11C	3.23
12x14	#12A	2.50	#12B	3.00	#12C	3.49
12x16	#13A	2.69	#13B	3.23	#13C	3.76
12x18	#14A	2.88	#14B	3.46	#14C	4.03
12x20	#15A	3.07	#15B	3.69	#15C	4.30
12x22	#16A	3.26	#16B	3.92	#16C	4.57
12x24	#17A	3.46	#17B	4.15	#17C	4.84
14x14	#22A	2.69	#22B	3.23	#22C	3.76
14x16	#23A	2.88	#23B	3.46	#23C	4.03
14x18	#24A	3.07	#24B	3.69	#24C	4.30
14x20	#25A	3.26	#25B	3.92	#25C	4.57
14x22	#26A	3.46	#26B	4.15	#26C	4.84
14x24	#27A	3.65	#27B	4.38	#27C	5.11
16x16	#33A	3.07	#33B	3.69	#33C	4.30
16x18	#34A	3.26	#34B	3.92	#34C	4.57
16x20	#35A	3.46	#35B	4.15	#35C	4.84
16x22	#36A	3.65	#36B	4.38	#36C	5.11
16x24	#37A	3.84	#37B	4.61	#37C	5.38
18x18	#44A	3.46	#44B	4.15	#44C	4.84
18x20	#45A	3.65	#45B	4.38	#45C	5.11
18x22	#46A	3.84	#46B	4.61	#46C	5.38
18x24	#47A	4.03	#47B	4.84	#47C	5.64
20x20	#55A	3.84	#55B	4.61	#55C	5.38
20x22	#56A	4.03	#56B	4.84	#56C	5.64
20x24	#57A	4.22	#57B	5.07	#57C	5.91
20x30	#510A	4.80	#510B	5.76	#510C	6.72
22x22	#66A	4.22	#66B	5.07	#66C	5.91
22x24	#67A	4.42	#67B	5.30	#67C	6.18
22x34	#612A	5.38	#612B	6.45	#612C	7.53
24x24	#77A	4.61	#77B	5.53	#77C	6.45
24x32	#711A	5.38	#711B	6.45	#711C	7.53
26x26	#88A	4.99	#88B	5.99	#88C	6.99
26x42	#816A	6.53	#816B	7.83	#816C	9.14
28x28	#99A	5.38	#99B	6.45	#99C	7.53
30x30	#1010A	5.76	#1010B	6.91	#1010C	8.06
32x32	#1111A	6.14	#1111B	7.37	#1111C	8.60
17x17	-------	3.26	-------	3.92	-------	4.57
23x23	-------	4.42	-------	5.30	-------	6.18

OTHER SIZES
INSTRUCTIONS FOR ORDERING

Price per Inch of Girth

A 24" High	.048	D 42" high	.0768
B 30" High	.0576	E 48" High	.0864
C 36" High	.0672		

EXAMPLE: Plenum is 19x23 — 30" High

Girth = 19 + 23 + 19 + 23 = 84

Net Dealer Price = 84 x .0576 = $4.84

EASY TO STOCK!

EASY TO STORE!

EASY TO HANDLE!

NET DEALER PRICES FOR ORDERING PARTS ONLY

SIDES ONLY

Size	Side No.	A Height 24"	Side No.	B Height 30"	Side No.	C Height 36"
12"	#1A	.46	#1B	.58	#1C	.69
14"	#2A	.54	#2B	.67	#2C	.81
16"	#3A	.61	#3B	.77	#3C	.92
18"	#4A	.69	#4B	.86	#4C	1.04
20"	#5A	.77	#5B	.96	#5C	1.15
22"	#6A	.84	#6B	1.06	#6C	1.27
24"	#7A	.92	#7B	1.15	#7C	1.38
26"	#8A	1.00	#8B	1.25	#8C	1.50
28"	#9A	1.08	#9B	1.34	#9C	1.61
30"	#10A	1.15	#10B	1.44	#10C	1.73
32"	#11A	1.23	#11B	1.54	#11C	1.84
34"	#12A	1.31	#12B	1.63	#12C	1.96
42"	#16A	1.61	#16B	2.02	#16C	2.42
17"	....	.65	....	.82	....	.98
23"	....	.88	....	1.10	....	1.32

INSTRUCTIONS FOR ORDERING PARTS

Example: #34C Plenum (16x18—36" High)

1	#34 Top (16x18)	.65
2	#3C Sides (16" wide—36" high) @ .92 ea.	1.84
2	#4C Sides (18" wide—36" high) @ 1.04 ea.	2.08
		4.57

TOP ONLY

Size Inches	Top No.	Net Dealer Price
12x12	#11	.46
12x14	#12	.50
12x16	#13	.54
12x18	#14	.58
12x20	#15	.61
12x22	#16	.65
12x24	#17	.69
14x14	#22	.54
14x16	#23	.58
14x18	#24	.61
14x20	#25	.65
14x22	#26	.69
14x24	#27	.73
16x16	#33	.61
16x18	#34	.65
16x20	#35	.69
16x22	#36	.73
16x24	#37	.77
18x18	#44	.69

Size Inches	Top No.	Net Dealer Price
18x20	#45	.73
18x22	#46	.77
18x24	#47	.81
20x20	#55	.77
20x22	#56	.81
20x24	#57	.84
20x30	#510	.96
22x22	#66	.84
22x24	#67	.88
22x34	#612	1.08
24x24	#77	.92
24x32	#711	1.08
26x26	#88	1.00
26x42	#816	1.31
28x28	#99	1.08
30x30	#1010	1.15
32x32	#1111	1.23
17x17	-----	.65
23x23	-----	.88

Printed in U.S.A. 12572500

10 YEAR GUARANTY

Southaire

Warm Air Heating Units

The E. E. Souther Iron Co. guarantees that this Furnace will deliver the amount of heat for which it is rated.

The Heating Element of this furnace is guaranteed to the original owner for Ten (10) Years after the original installation against failure or burning out due to defects of material or workmanship. The heating element will be exchanged at no charge, if returned, F. O. B. St. Louis, Missouri, and after inspection is found to be defective in material or workmanship.

Electrical and Mechanical Parts of this furnace, such as motors, transformers, relays, controls, valves and pumps which are supplied by other manufacturers, are guaranteed against defects of materials and workmanship for One (1) Year after original installation, or to the extent that these parts are guaranteed by their respective manufacturers.

These guarantees apply only when this furnace (1) is installed properly in accordance with the recommendations of the National Warm Air Heating and Air Conditioning Association; (2) has been fired with the proper type of fuel; (3) has not been fired at an input in excess of its rated input capacity; (4) has not been operated without adequate air circulation over the heating element, or without proper limit to warm air temperature; (5) has not been damaged through malice or ignorance.

Fill Out and Keep for Future Reference

Furnace Unit No._____ Installation Date_____

Name of Owner_____ Installing Dealer_____

Address of Owner_____ Address of Dealer_____

Address of Installation_____ _____

E. E. SOUTHER IRON CO.

1952 Kienlen Ave. St. Louis 20, Missouri

SH-157-1

STOKERATOR STOKERS

		F.O.B. PEORIA	F.O.B. ST. LOUIS
A-30	30# Per Hour - Less Controls	220.00	226.68
A-50	50# Per Hour - Less Controls	229.00	235.68
A-30	30# Per Hour - With Controls *	263.00	269.68
A-50	50# Per Hour - With Controls *	290.00	296.68

* Controls include T-86-A Thermostat, R-883-B Stokerelay

and Choice of L-419-A Warm Air Limit, L-409-A Hot Water Aquastat or P-404A Steam Pressuretrol.

Let the NORTH WINDS BLOW

WHEN STOKERATOR IS YOUR FIREMAN

STOKER-ATOR
K & R BUILDERS SUPPLY CORP.
PEORIA HEIGHTS, ILLINOIS

E. E. SOUTHER IRON CO.
1952 KIENLEN AVE.
ST. LOUIS 20, MO.
EV. 5-5980

See THESE MANY ADVANTAGES

COMFORT EVEN TEMPERATURE
Now it's nice to get up in the morning because STOKERATOR provides cozy healthful heat to greet you.

CONVENIENCE
STOKERATOR maintains whatever temperature you want. No more fire banking, draft adjusting, fire building.

CLEANLINESS
Cleaner, tidier basement and home — when STOKERATOR is your fireman.

SAFETY
STOKERATOR burns coal, the safest fuel, the safest way. Automatic firing eliminates dangers of over-heating furnaces and flues.

HEALTHY
STOKERATOR eliminates fluctuating temperatures. Never too hot, never too cold. Healthful warmth as YOU like it.

ECONOMICAL
STOKERATOR gives you the lowest cost in automatic heat. Compare STOKERATOR in first cost and fuel saving.

YOU CAN ENJOY ALL THE COMFORTS OF AUTOMATIC HEAT AT LOWER COST WITH A

STOKERATOR

K & R BUILDERS SUPPLY CORP.

MODEL A30

A FULL SIZE 30 pound STOKERATOR priced for the average home! It's engineered and constructed to give years of carefree, dependable convenience with unheard-of economy. It's trim and beautiful, too, a stoker that is at home in modern basements — the kind you'll be **proud** to show to your friends. That's why thousands of home-owners have chosen STOKERATOR.

MODEL A50

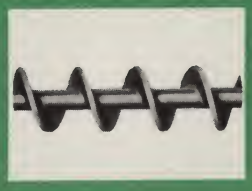
Here's a truly superior STOKERATOR for large homes.

It offers quality of construction, design and a host of features and improvements that make the STOKERATOR A50 outstanding in any price class. It has extra capacity, too — up to 50 lbs. per hour.

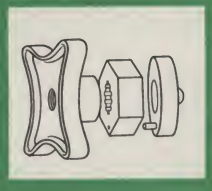
PEORIA HEIGHTS, ILLINOIS

A STOKERATOR

Long hour duty General Electric motor, totally enclosed. Protected by automatic overload cut-out.



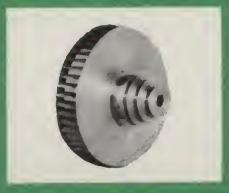
New lifetime vanadium steel screw is heat-treated for long life. Delivers coal with less power.



This new improved clutch assembly does away with the old fashioned shear pin and is replaced with a small safety plug, without tools.

Constant speed transmission accepted by engineers as best for Stoker use. Requires less power, reduces noise materially.

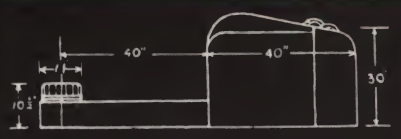
Air muffler with automatic air damper control makes STOKERATOR practically noiseless — maintains fuel bed at its highest efficiency.



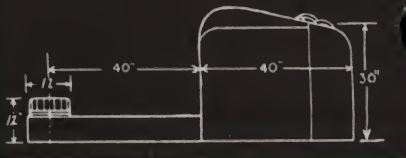
New Zephyr type fan is quieter, smoother. Automatically maintains the desired air pressure.

Perfected retort of sectional design is made from highest heat resisting alloys. Better heat distribution.

The heavy STOKERATOR tuyeres are of sectional design to allow for expansion and contraction.



SPECIFICATIONS		
MODELS	A30	A50
Burning Capacity	16 to 30	20 to 50
Motor H. P.	⅙	⅙
Hopper Rated Capacity Lbs.	500	500
Steam Radiation Sq. Ft.	750	1100
Hot Water Radiation Sq. Ft.	1125	1650
Above Radiation Based on 10,000 B. T. U. Coal		



Only THE WORLD'S FINEST CONTROLS . . .

A stoker's performance can only be as good as its controls! That's why STOKERATOR uses only the **best** — nationally recognized stoker controls produced by the world's leading manufacturers. STOKERATOR controls are available for warm air, hot water or steam systems. The use of these famous precision controls is just one more reason why STOKERATOR performance is so outstanding.

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Room Thermostat

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